

RI/SP-272-3201

c.3

SOLAR ENERGY TECHNICAL PUBLICATIONS CATALOG

SOLAR THERMAL TECHNOLOGY

U.S. Department of Energy Research Laboratories

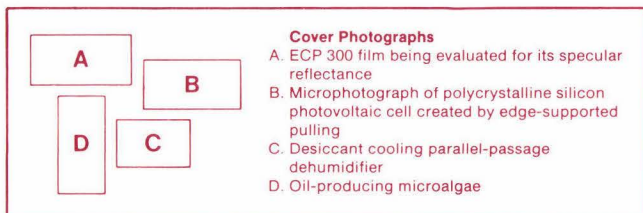
Solar Energy Technical Publications Catalog

Preface

The research and development described in these documents was conducted within the U.S. Department of Energy's (DOE) Solar Thermal Technology Program. The goal of this program is to advance the engineering and scientific understanding of solar thermal technology and to establish the technology base from which private industry can develop solar thermal power production options for introduction into the competitive energy market.

Solar thermal technology concentrates the solar flux using tracking mirrors or lenses onto a receiver where the solar energy is absorbed as heat and converted into electricity or incorporated into products as process heat. The two primary solar thermal technologies, central receivers and distributed receivers, employ various point and line-focus optics to concentrate sunlight. Current central receiver systems use fields of heliostats (two-axis tracking mirrors) to focus the sun's radiant energy onto a single, tower-mounted receiver. Point focus concentrators up to 17 meters in diameter track the sun in two axes and use parabolic dish mirrors or Fresnel lenses to focus radiant energy onto a receiver. Troughs and bowls are line-focus tracking reflectors that concentrate sunlight onto receiver tubes along their focal lines. Concentrating collector modules can be used alone or in a multimodule system. The concentrated radiant energy absorbed by the solar thermal receiver is transported to the conversion process by a circulating work fluid. Receiver temperatures range from 100°C in low-temperature troughs to over 1500°C in dish and central receiver systems.

The Solar Thermal Technology Program is directing efforts to advance and improve each system concept through solar thermal materials, components, and subsystems research and development and by testing and evaluation. These efforts are carried out with the technical direction of DOE and its network of field laboratories that works with private industry. Together they have established a comprehensive, goal-directed program to improve performance and provide technically proven options for eventual incorporation into the nation's energy supply.



To successfully contribute to an adequate energy supply at reasonable cost, solar thermal energy must be economically competitive with a variety of other energy sources. The Solar Thermal Technology Program has developed components and system-level performance targets as quantitative program goals. These targets are used in planning research and development activities, measuring progress, assessing alternative technology options, and developing optimal components. These targets are pursued vigorously to ensure a successful program.

This catalog represents part of an effort to provide information on publications about solar thermal research and development activities conducted by DOE's laboratories. Publications listed include technical and research reports and special publications. The following national laboratories are represented in this edition:

Sandia National Laboratories
Solar Energy Research Institute
Jet Propulsion Laboratory

This catalog is a product of the DOE Solar Technical Information Program, which is dedicated to providing information to scientific and industrial users in ways most convenient and useful to them. This catalog focuses on solar thermal technologies, and its purpose is to keep the scientific and industrial communities informed of the latest developments in federally sponsored research in this technology.

How this Catalog Is Organized

- Citations are listed under eight subject headings. If a cited document covers more than one subject, it will be repeated under each appropriate heading.
- The documents cited under each subject heading are listed in reverse chronological order.
- For each citation, the sponsoring laboratory will be cited in full, except for the Solar Energy Research Institute, which will be cited by its acronym, SERI, in the document number for the publication.

How To Order Publications

Copies of publications listed in this catalog are available in print and microfiche form from the National Technical Information Service (NTIS). Selected documents are also available from the U.S. Superintendent of Documents, U.S. Government Printing Office (GPO). Each citation lists the

Solar Thermal Technology

source or sources selling the publication along with the specific order number. Prices for documents ordered from NTIS are based on the number of pages in the publication, (see the price schedule on this page). Order forms for both of these distribution outlets are in the back of this catalog.

Occasionally, a new SERI document cannot be obtained because of the time it takes to process these publications at NTIS or GPO after SERI publishes them. In these few cases, SERI documents can be ordered from SERI's Document Distribution Service using the NTIS price structure. Please list the title, author, and SERI report number, and send a check or money order to

Document Distribution Service
Solar Energy Research Institute
1617 Cole Boulevard
Golden, Colorado 80401-3393

NTIS Pricing Rates (9/30/87)

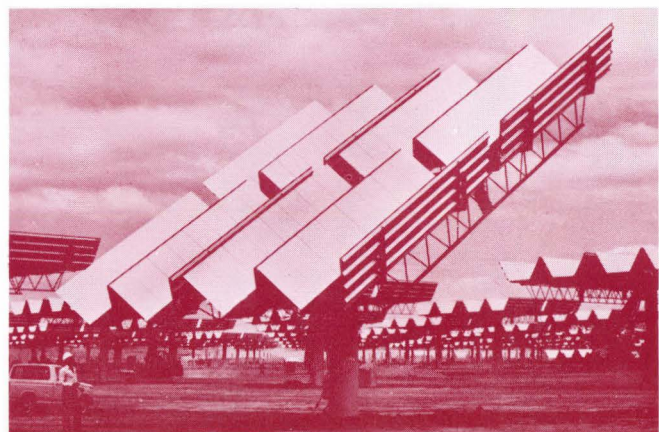
Code	Page Range	Price (\$)
MF*	all pages	6.50
A02	001-025	9.95
A03	026-050	11.95
A04	051-075	13.95
A05	076-100	13.95
A06	101-125	18.95
A07	126-150	18.95
A08	151-175	18.95
A09	176-200	18.95
A10	201-225	24.95
A11	226-250	24.95
A12	251-275	24.95
A13	276-300	24.95
A14	301-325	30.95
A15	326-350	30.95
A16	351-375	30.95
A17	376-400	30.95
A18	401-425	36.95
A19	426-450	36.95
A20	451-475	36.95
A21	476-500	36.95
A22	501-525	42.95
A23	526-550	42.95
A24	551-575	42.95
A25	576-600	42.95
A99	601-up**	

*Microfiche

Contact NTIS for price quote. **SOLAR ENERGY RESEARCH INSTITUTE
TECHNICAL LIBRARY

Contents

General Publications and Overviews	1
Materials	5
Collectors, Concentrators, and Reflectors	9
Receivers	13
Systems	21
Solar Ponds	29
Storage	31
Standards, Tests, and Measurements	34
NTIS Order Blanks	41
Superintendent of Documents Order Blanks	43



Limitations of this Catalog

This catalog was produced in a conscientious effort to identify significant research reports in solar thermal energy produced by DOE laboratories from January 1982 to December 1986. It lists only those documents that are available for sale from NTIS or GPO. For a complete list of all Solar Thermal Research and Technology publications, refer to the *Solar Thermal Technology Program Bibliography 1973-1985*, available through NTIS. Some reports may have inadvertently been omitted. If you are aware of any omissions, please inform us so the missing reports may be included in the next edition. Please send that information (with a copy of the document, if possible) to

Solar Energy Technical Publications Catalog
Solar Technical Information Program
Solar Energy Research Institute
1617 Cole Boulevard
Golden, Colorado 80401-3393

MAY 11 1988

GOLDEN, COLORADO 80401

General Publications and Overviews

Solar Thermal Technology Program Bibliography, 1973–1985, SERI/SP-272-3008 (Dec 1986) 192 pp. NTIS Order No. DE86010728

Review of the Solar Thermal Power Industry: Future Outlook, Sandia National Laboratories/Livermore, SAND86-8183, Erickson, J. J., La Porta, C. (Oct 1986) 103 pp. NTIS Order No. DE87001348

Five Year Research and Development Plan, 1986–1990; National Solar Thermal Technology Program, U.S. Department of Energy, Assistant Secretary, Conservation and Renewable Energy, DOE/CE-0160 (Sep 1986) 36 pp. NTIS Order No. DE86013644

Solar Thermal Central Receiver Technology Transfer Strategy Analysis; Executive Summary, Sandia National Laboratories/Livermore, SAND86-8184-Exec.Summ, Bos, P. B., Doyle, J. F. (Aug 1986) 69 pp. NTIS Order No. DE87000275

Solar Thermal Central Receiver Technology Transfer Strategy Analysis; Final Report, Sandia National Laboratories/Livermore, SAND86-8184, Bos, P. B., Doyle, J. F. (Aug 1986) 162 pp. NTIS Order No. DE87000276

Solar Thermal Technology Annual Evaluation Report, Fiscal Year 1985, DOE/CH10093-1 (Aug 1986) 80 pp. NTIS Order No. DE86010711

Proceedings of the Solar Thermal Technology Conference; Albuquerque, New Mexico; June 17–19, 1986, Sandia National Laboratories/Albuquerque, SAND86-0536, Diver, R. B. (Jun 1986) 345 pp. NTIS Order No. DE86011703

Southwest Utility Expansion Plans; Implications for Solar Thermal Electric Technologies, Sandia National Laboratories/Livermore, SAND85-8022, Dirks, J. A. (Jun 1986) 54 pp. NTIS Order No. DE86011911

Solar Thermal Energy Systems Program Summary Fiscal Year 1985, SERI/SP-273-2938 (Apr 1986) 168 pp. NTIS Order No. DE86004441

Solar Thermal Central Receiver Integrated Commercialization Analysis; Final Report, Volume 2—Appendices, Sandia National Laboratories/Livermore, SAND86-8176-Vol.2-App, Doyle, J. F. Bos, P. B., Weingart, J. M., Kelly, B. (Mar 1986) 92 pp. NTIS Order No. DE86011916

Solar Thermal Central Receiver Integrated Commercialization Analysis; Final Report, Volume 1, Sandia National Laboratories/Livermore, SAND86-8176-Vol.1, Doyle, J. F., Bos, P. B., Weingart, J. M., Kelly, B. (Mar 1986) 209 pp. NTIS Order No. DE86011915

Solar Thermal Central Receiver Integrated Commercialization Analysis; Final Report, Executive Summary, Sandia National Laboratories/Livermore, SAND86-8176-Exec.Summ, Doyle, J. F., Bos, P. B., Weingart, J. M. (Mar 1986) 37 pp. NTIS Order No. DE86011917

Cost Data Management System; CDMS Version 2.2, Final Report, Sandia National Laboratories/Livermore, SAND85-8178, Weingart, J. M. (Dec 1985) 118 pp. NTIS Order No. DE86005064

Cost Data Management System User's Guide Supplement; CDMS Version 2.2, Sandia National Laboratories/Livermore, SAND85-8179, Weingart, J. M. (Dec 1985) 67 pp. NTIS Order No. DE86005062

Proceedings of the Department of Energy Solar Central Receiver Technology Annual Meeting, Sandia National Laboratories/Livermore, SAND85-8241 (Dec 1985) 543 pp. NTIS Order No. DE86006320

Solar Thermal Technology Annual Evaluation Report, Fiscal Year 1984, DOE/CE-T13 (Jul 1985) 86 pp. NTIS Order No. DE85008793

Status and Progress in Solar Thermal Research and Technology, SERI/TP-250-2761, Gupta, B. P. (Jul 1985) 7 pp. NTIS Order No. DE85012157

Solar Thermal Advanced Research and Development Bibliography, SERI/SP-271-2644 (May 1985) 43 pp. NTIS Order No. DE85008790

Solar Thermal Research Program Annual Conference; Lakewood, Colorado; 20–22 February 1985, SERI/CP-251-2680 (Apr 1985) 230 pp. NTIS Order No. DE85002938

Solar Thermal Research Program, SERI/TP-251-2671, Gupta, B. P., Carasso, M., Nix, R. G. (Mar 1985) 10 pp. NTIS Order No. DE8500514

Study of Alternative System Conversions for the Solar One Pilot Plant, Sandia National Laboratories/Livermore, SAND85-8212 (Mar 1985) 63 pp. NTIS Order No. DE85010026

Parabolic Dish Test Site History and Operating Experience, Jet Propulsion Laboratory, DOE/JPL-1060-84, Selcuk, M. K. (Feb 1985) 221 pp. NTIS Order No. DE85014502

Data Evaluation Plan for the 10-MW_e Solar Thermal Central Receiver Pilot Plant Power Production Phase, Sandia National Laboratories/Livermore, SAND84-8237, Radosevich, L. G. (Oct 1984) 46 pp. NTIS Order No. DE85002863

Solar Thermal Central Receiver Cost Data Management System (CDMS); Final Report, Sandia National Laboratories/Livermore, SAND83-8176, Weingart, J. M., Bos, P. B. (Oct 1984) 100 pp. NTIS Order No. DE85003196/XAB

Solar Thermal Central Receiver Cost Data Management System (CDMS) Software User's Guide; CDMS Version 1.1, Sandia National Laboratories/Livermore, SAND83-8175, Weingart, J. M. (Oct 1984) 120 pp. NTIS Order No. DE85002954

Assessment of Industry Views on International Business Prospects for Solar Thermal Technology, Sandia National Laboratories/Livermore, PNL-5255, Easterling, J. C. (Sep 1984) 59 pp. NITS Order No. DE85000151/XAB

Survey of Manufacturers of High-Performance Heat Engines Adaptable to Solar Applications, Jet Propulsion Laboratory, DOE/JPL-1060-75, Stine, W. B. (Jun 1984) 38 pp. NTIS Order No. DE85000322

Solar Thermal Technology Annual Evaluation Report, Fiscal Year 1983, SERI/PR-253-2188 (Aug 1984) 128 pp. NTIS Order No. DE84013029

Coolidge Solar Irrigation Project; 1982 Annual Report, Sandia National Laboratories/Albuquerque, SAND83-7124, Larson, D. L. (Oct 1983) 126 pp. NTIS Order No. DE84001081

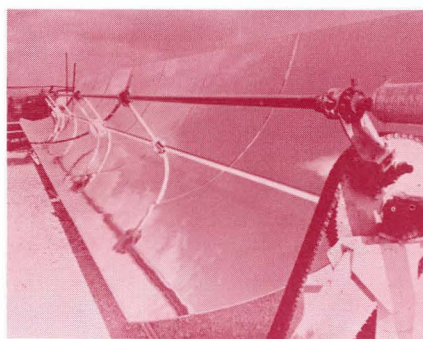
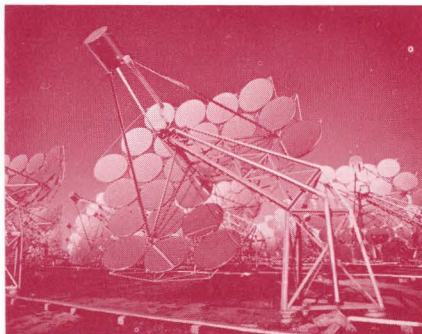
Coolidge Solar Irrigation Project; Final Report, Sandia National Laboratories/Albuquerque, SAND83-7125, Larson, D. L. (Oct 1983) 82 pp. NTIS Order No. DE84001686

Final Report on Test of STEP, Shenandoah Parabolic Dish Solar Collector Quadrant Facility, Sandia National Laboratories/Albuquerque, SAND82-7153, Saydah, A. R., Koenig, A. A., Lambert, R. H., Kugath, D. A. (Apr 1983) 135 pp. NTIS Order No. DE83017712

SOLAR THERMAL TECHNICAL INFORMATION GUIDE

A comprehensive resource on solar thermal information

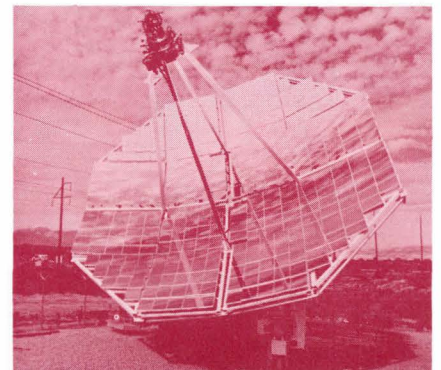
From the history and theory of solar thermal energy to the latest activity in research and development, this book covers a full range of topics. It also includes descriptions for a variety of solar thermal documents and identifies key personnel at 155 existing research centers.



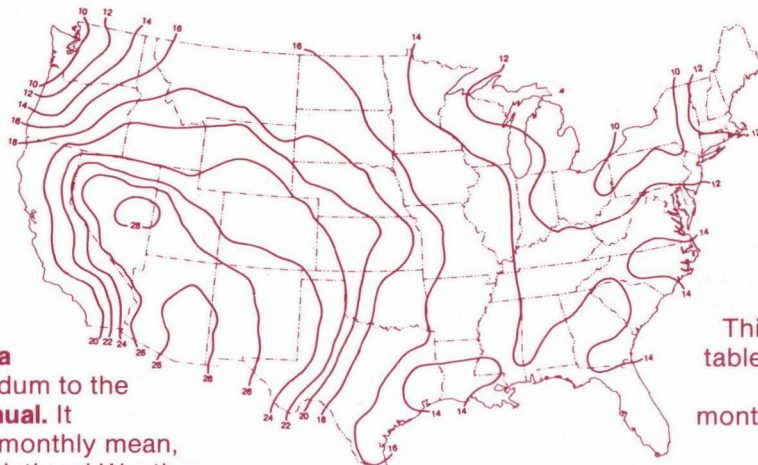
This extremely thorough guide represents the most comprehensive solar thermal source book available. Information in the Guide includes annotated bibliographies, data bases, as well as lists of directories, associations, journals, and computer models. If your work

involves solar thermal technology, this important reference tool should be on your desk.

Available from the Superintendent of Documents. 182 pp. Stock no. 061-000-00659-1. \$7.00.



Direct Normal Solar Radiation Data Manual



The **Direct Normal Solar Radiation Data Manual** is an addendum to the **Insolation Data Manual**. It provides long-term monthly mean, daily totals for 235 National Weather Service (NWS) stations and explains how they were derived. Although the values are estimates, they do cover 23 years of solar radiation and meteorological data available in the SOLMET and ERSATZ data bases.

This manual includes data tables for the NWS stations, station histories, and monthly and annual contour maps.

These long-term averages are useful to design engineers and performance analysts working to optimize solar energy systems in given locations.

Available from the Superintendent of Documents.
72 pp. Stock no. 0561-000-00593-5. \$4.75.

Investor and Federal Treasury Returns from Investing in Solar-Thermal Energy, Sandia National Laboratories/Livermore, SAND82-8057, Sharp, J. K., Miller, G. J. (Feb 1983) 41 pp. NTIS Order No. DE83008723

Research and Development Project Evaluation and Selection Methods for the Solar Thermal Technology Program, SERI/TR-251-1573, Krawiec, F. (Feb 1983) 62 pp. NTIS Order No. DE83008296.

Solar-Thermal Technology Development: Estimated Market Size and Energy Cost Savings: Volume I—Executive Summary, Jet Propulsion Laboratory, DOE/JPL-1060-60, Vol. 1, Gates, W. R. (Feb 1983) 13 pp. NTIS Order No. DE84001223

Solar-Thermal Technology Development: Estimated Market Size and Energy Cost Savings: Volume II—Assumptions, Methodology, and Results, Jet Propulsion Laboratory, DOE/JPL-1060-60, Vol. 2, Gates, W. R. (Feb 1983) 98 pp. NTIS Order No. DE84001224

Near-Term Leveraged Leases for Commercial Solar Investments, Sandia National Laboratories/Livermore, SAND82-8038, Sharp, J. K. (Dec 1982) 24 pp. NTIS Order No. DE83005904

Environmental Effects of Solar Thermal Power Systems, Ecological Observations During Early Testing of the Barstow 10-MW_e Pilot STPS, Sandia National Laboratories/Livermore, UCLA 12-1385, Turner, F. B. (Nov 1982) 54 pp. NTIS Order No. DE83004454

Environmental Effects of Solar Thermal Power Systems; Wind Flow Field Measurements in the Wake of the Barstow Solar Thermal Power Plant, Sandia National Laboratories/Livermore, UCLA 12-1388, Radkey, R. L., Zambrano, T. G. (Nov 1982) 33 pp. NTIS Order No. DE83004451

Wildlife Interactions at Solar One Facility; Daggett, California; Spring 1982 Interim Report, Sandia National Laboratories/Livermore, DOE/SF/10501-301, McKernan, R. L., Flanagan, P. A., Schreiber, R. W. (Oct 1982) 22 pp. NTIS Order No. DE84002396

Safety-Analysis Report; MISR Qualification Test System and Test Site (Modular Industrial Solar Retrofit Project), Sandia National Laboratories/Albuquerque, SAND82-1159, Alvis, R. L. (Sep 1982) 72 pp. NTIS Order No. DE83002530

Solar-Thermal Technologies Benefits Assessment; Objectives, Methodologies, and Results for 1981, Jet Propulsion Laboratory, DOE/JPL-1060-55, Gates, W. R. (Jul 1982) 44 pp. NTIS Order No. DE83000475

Coolidge Solar Irrigation Project; 1981 Annual Report, Sandia National Laboratories/Albuquerque, SAND82-0521, Torkelson, L. E., Larson, D. L. (Jun 1982) 128 pp. NTIS Order No. DE83001853

Environmental Effects of Solar Thermal Power Systems; Systematic Status of the Mojave Ground Squirrel Spermophilus Mohavensis; Subgenus: Xerospermophilus, Sandia National Laboratories/Livermore, UCLA 12-1373, Hafner, D. J., Yates, T. L. (Jun 1982) 17 pp. NTIS Order No. DE82019851

Solar Repowering Assessment, Sandia National Laboratories/Livermore, SAND81-8015, Gibson, J. C. (Jun 1982) 65 pp. NTIS Order No. DE82017801

Solar Thermal Technology; Annual Technical Progress Report FY 1981; Volume I—Executive Summary, Jet Propulsion Laboratory, DOE/JPL-1060-53-Vol. 1, (Jun 1982) 12 pp. NTIS Order No. DE83001329

Solar Thermal Technology; Annual Technical Progress Report FY 1981; Volume II—Technical, Jet Propulsion Laboratory, DOE/JPL-1060-53-Vol. 2, (Jun 1982) 113 pp. NTIS Order No. DE83001330

Industry/Government Forum on Recent Policy and Budget Changes in the DOE Solar Thermal Program; Fredericksburg, Virginia; May 6, 1981, Sandia National Laboratories/Livermore, SAND82-8207, Radosevich, L. G. (Feb 1982) 39 pp. NTIS Order No. DE82012511

Materials

Solar Thermal Technology Program Bibliography, 1973–1985, SERI/SP-272-3008 (Dec 1986) 192 pp. NTIS Order No. DE86010728

Viscosity Measurement of Molten Carbonate Salt, SERI/STR-252-2905, Janz, G. J. (Sep 1986) 73 pp. NTIS Order No. DE86014511

Effect of the Size of Structural Bulk Inhomogeneities on the Specular Transmittance of Polymer Films, SERI/TP-255-2995, Neidlinger, H. H. (Jul 1986) 6 pp. NTIS Order No. DE86010727

Experimental Investigation of Thermochemical Transport for Solar Applications Using Sulfur Trioxide, Sandia National Laboratories/Albuquerque, SAND86-7028, McCrary, J. H., McCrary, G. E., Martinez, J. I. (May 1986) 102 pp. NTIS Order No. DE86011762

Optical Characterization of Solid Particle Solar Central Receiver Materials, Sandia National Laboratories/Albuquerque, SAND85-1215, Stahl, K. A., Griffin, J. W., Matson, B. S., Pettit, R. B. (May 1986) 117 pp. NTIS Order No. DE86011908

Polymer Reflectors Research during FY 1985, SERI/PR-255-2835, Schissel, P. O., Neidlinger, H. H., Czanderna, A. W. (May 1986) 111 pp. NTIS Order No. DE86010697

Workshop on the Physics and Chemistry of Solar-Flux Effects on Condensed Phase/Gas Interfaces, July 30–31, 1985, Golden, Colorado, SERI/CP-255-2908, Gross, G. E., Harris, H. H. (May 1986) 36 pp. NTIS Order No. DE86004460

Oxidation/Sulfidation of Material Candidates for Distributed Solar Receiver Thermochemical Transport Program SO₃, Sandia National Laboratories/Albuquerque, SAND85-2091, Weirick, L. J. (Apr 1986) 35 pp. NTIS Order No. DE86011696

Corrosion of Selected Alloys in Eutectic Lithium-Sodium-Potassium Carbonate at 900°C, SERI/PR-255-2561, Coyle, R. T., Thomas, T. M., Schissel, P. O. (Jan 1986) 26 pp. NTIS Order No. DE86004417

Oxidation/Sulfidation of Material Candidates for Distributed Solar Receiver Thermochemical Transport Program, Sandia National Laboratories/Albuquerque, SAND85-1657C, Weirick, L. J. (1986) 16 pp. NTIS Order No. DE86005633

Reflectance Loss of Prospective Solar Concentrator Mirrors in Erosive Environments; The Crosbyton Solar Power Project, DOE/AL/21557-T9, Bethea, R. M., Barringer, M. T., Chin, S., Collier, E. G., Cooper, A. M., Reichert, J. D., Jr., Williams, P. F. (1986) 358 pp. NTIS Order No. DE86015366

Photodegradation Inhibitors for Polyacrylonitrile/Ag (PAN/Ag) Films; Annual Report, SERI/STR-255-2723, Sergides, C. A., Chughtai, A. R., Smith, D. M. (Sep 1985) 76 pp. NTIS Order No. DE85016864

Optical Properties of High-Temperature Materials for Direct Absorption Receivers, SERI/TP-255-2791, Jorgensen, G. J., Schissel, P. O., Burrows, R. W. (Aug 1985) 8 pp. NTIS Order No. DE85012171

Photodegradation Studies of Silver-Backed Polyacrylonitrile (PAN) Films, SERI/TP-255-2751, Smith, D. M., Chughtai, A. R., Sergides, C. A., Schissel, P. O. (Jul 1985) 11 pp. NTIS Order No. DE85012154

Polymer Glazings for Silver Mirrors, SERI/TP-255-2724, Neidlinger, H. H., Schissel, P. O. (Jul 1985) 10 pp. NTIS Order No. DE85012140

Polymer Synthesis and Modification Research During FY 1985, SERI/TR-255-2590, Neidlinger, H. H., Schissel, P. O. (Jul 1985) 71 pp. NTIS Order No. DE85012160

Specularity and Stability of Silvered Polymers, SERI/TP-255-2743, Czanderna, A. W., Schissel, P. O. (Jul 1985) 11 pp. NTIS Order No. DE85012156

10-MW_e Solar Thermal Central Receiver Pilot Plant Mirror Module Corrosion, Torque Tube Damage, and Mirror Reflectance Survey, July 1984, Sandia National Laboratories/Livermore, SAND85-8225, Decker, E. V., Lopez, C. W., Mavis, C. L., Noring, J. E. (Jul 1985) 37 pp. NTIS Order No. DE85016226

Corrosion of Materials in Molten Alkali Carbonate Salt at 900°C, SERI/TR-255-2553, Coyle, R. T., Thomas, T. M., Schissel, P. O. (Jun 1985) 40 pp. NTIS Order No. DE85012158

Oxidation/Sulfidation of Material Candidates for Distributed Solar Receiver Thermochemical Transport Program in SO₂/O₂, Sandia National Laboratories/Albuquerque, SAND85-0757, Weirick, L. J. (Jun 1985) 35 pp. NTIS Order No. DE85017391

Silver/Glass Mirrors for Solar Thermal Systems, SERI/SP-271-2293 (Jun 1985) 70 pp. NTIS Order No. DE85000537/XAB

High Temperature Molten Salt Containment, SERI/TR-252-2490, Wang, K. Y., West, R. E., Kreith, F., Lynn, P. P. (May 1985) 64 pp. NTIS Order No. DE85012152

Identification of Chemical and Physical Phenomena Affecting the Durability of Silvered Polymer (PMMA) Mirrors, SERI/PR-255-2493, Schissel, P. O., Neidlinger, H. H., Czanderna, A. W. (May 1985) 42 pp. NTIS Order No. DE85012131

Fluids and Containment Materials Compatibility Research, SERI/TP-255-2699, Coyle, R. T., Thomas, T. M., Schissel, P. O. (Apr 1985) 10 pp. NTIS Order No. DE85008785

Silver-Silicon Bonding on Silica Surfaces, SERI/TR-255-2410, Pitts, J. R. (Apr 1985) 253 pp. NTIS Order No. DE85012138

Silvered Polymer Reflectors, SERI/TP-255-2670, Schissel, P. O., Neidlinger, H. H., Czanderna, A. W. (Mar 1985) 10 pp. NTIS Order No. DE85008782

Exploratory Corrosion Tests on Alloys in Molten Salts at 900°C, SERI/TP-255-2492, Coyle, R. T., Thomas, T. M., Lai, G. Y. (Oct 1984) 15 pp. NTIS Order No. DE85000511

Exploratory Corrosion Tests on Materials and Fluids for Advanced High-Temperature Molten-Salt Storage, SERI/TP-255-2199, Coyle, R. T., Burrows, R. W., Goggin, R. M., Thomas, T. M. (Oct 1984) 46 pp. NTIS Order No. DE85002911

Sol-Gel-Derived AR Coatings for Solar Receivers, Sandia National Laboratories/Albuquerque, SAND84-0662, Ashley, C. S., Reed, S. T. (Sep 1984) 29 pp. NTIS Order No. DE85000192

Effective Antireflection Coatings of Transparent Polymeric Materials by Gas-Phase Surface Fluorination, SERI/TP-255-2387, Jorgensen, G. J., Schissel, P. O. (Jul 1984) 7 pp. NTIS Order No. DE84013027

Experimental Determinations of the Passive/Active Transition for Iron in 1-M Sulfuric Acid; A Subcontract Report, SERI/STR-255-1766, Russell, P. P., Newman, J. (Jun 1984) 28 pp. NTIS Order No. DE84013005

If your work involves solar thermal technology, then this important reference tool should be on your desk. Includes references to journal articles, conference papers, monographs, technical reports, and patents in solar thermal technology from 1973 through 1985. Technology-specific areas in solar thermal include parabolic dish research, distributed receiver technology, plus advanced research concepts.

The Place to Start!

Available from the National Technical Information Service. DE86010728. \$16.95.

Materials Characterization Using Ion, Electron, and Photon Probes, SERI/TR-255-2217, Czanderna, A. W. (May 1984) 53 pp. NTIS Order No. DE84004518

10-MW_e Solar Thermal Central Receiver Pilot Plant Mirror Module Corrosion Survey, Sandia National Laboratories/Livermore, SAND84-8214, Noring, J. E., Mavis, C. L., Decker, E. V., Skvarna, P. E. (Mar 1984) 52 pp. NTIS Order No. DE84009311

Solar Thermal Technology Program; Polymer Synthesis and Characterization Subtask Annual Progress Report FY 1983, SERI/PR-255-2148, Schissel, P. O., Neidlinger, H. H. (Dec 1983) 56 pp. NTIS Order No. DE84000094

Experimental Approach to Evaluating Environmental Degradation Mechanisms in Bisphenol-A Polycarbonate Films on Metallic Substrates, SERI/TR-255-1602, Webb, J. D. (Nov 1983) 119 pp. NTIS Order No. DE84000025

Polymeric Glazings, SERI/TP-255-2091, Schissel, P. O. (Oct 1983) 7 pp. NTIS Order No. DE84000016

High-Temperature Molten Salts for Use in Solar Thermal Energy Systems, SERI/TP-255-2001, Coyle, R. T., Copeland, R. J., Burrows, R. W., Goggin, R. M. (Sep 1983) 27 pp. NTIS Order No. DE83011997

Matrix Approach to Testing Mirrors; Part 2, SERI/TR-255-1627, Masterson, K. D., Czanderna, A. W., Blea, J., Goggin, R. M., Gutierrez, M., Jorgensen, G. J., McFadden, J. D. (Jul 1983) 114 pp. NTIS Order No. DE83011996

Polymer Degradation on Reflecting Metal Films; Fourier Transform Infrared (FTIR) Reflection-Absorbance Studies, SERI/TP-255-2054, Webb, J. D., Schissel, P. O., Thomas, T. M., Pitts, J. R., Czanderna, A. W. (Jul 1983) 7 pp. NTIS Order No. DE83012129

Slow-Strain-Rate Testing of 2.25Cr-1Mo in Molten-Nitrate Salt, Sandia National Laboratories/Livermore, SAND83-8214, Goods, S. H. (May 1983) 44 pp. NTIS Order No. DE83011894

X-Ray-Diffraction Analysis of Corrosion Products of Fe-Ni-Cr Alloys Formed in Molten-Nitrate Salts, Sandia National Laboratories/Livermore, SAND83-8223, Boehme, D. R., Bradshaw, R. W. (May 1983) 21 pp. NTIS Order No. DE83013317

Matrix Approach for Testing Mirrors; Part 1, SERI/TR-255-1504, Masterson, K. D., Lind, M. A. (Apr 1983) 35 pp. NTIS Order No. DE83009398

Development of a Silver Reflective Layer Subsurface in Corning Glass 7809, Sandia National Laboratories/Albuquerque, SAND82-0916, Lappin, S. M. (Mar 1983) 34 pp. NTIS Order No. DE83016020

Influence of Adhesive Shear Deformation on Laminate Structural Behavior with Application to Parabolic Trough Solar Collectors, Sandia National Laboratories/Albuquerque, SAND82-1825, Clauss, D. B., Reuter, R. C., Jr. (Feb 1983) 49 pp. NTIS Order No. DE83010293

Surface Analysis and Solar Energy Materials, SERI/TP-255-1586, Czanderna, A. W. (Jan 1983) 9 pp. NTIS Order No. SERITP2551586

Thermal Convection Loop Study of Corrosion of Alloy 800 in Molten NaNO₃-KNO₃, Sandia National Laboratories/Livermore, SAND82-8911, Bradshaw, R. W. (Jan 1983) 39 pp. NTIS Order No. DE83006766

Environmental Degradation of Solar Optical Materials; Volume I—Literature Survey, Sandia National Laboratories/Albuquerque, SAND82-7068/1, Morris, V. L. (Nov 1982) 130 pp. NTIS Order No. DE83010298

Manufacture, Distribution, and Handling of Nitrate Salts for Solar Thermal Applications, Sandia National Laboratories/Livermore, SAND81-8186, Fiorucci, L. C., Goldstein, S. L. (Nov 1982) 111 pp. NTIS Order No. DE83003317

Characterizing Solar Mirror Materials Using Portable Reflectometers, Sandia National Laboratories/Albuquerque, SAND82-1714, Pettit, R. B. (Sep 1982) 23 pp. NTIS Order No. DE83000804

Corrosion of Alloys in Molten Nitrates, Sandia National Laboratories/Livermore, SAND80-8181 (Sep 1982) 89 pp. NTIS Order No. DE83001156

Protective Coatings for Alloys in Contact with Molten Drawsalt (NaNO₃-KNO₃), Sandia National Laboratories/Livermore, SAND82-8028, Carling, R. W., Bradshaw, R. W., Mar, R. W. (Sep 1982) 26 pp. NTIS Order No. DE83002505

Solar Thermal Materials, SERI/TP-250-1624, Butler, B. L. (Aug 1982) 17 pp. NTIS Order No. SERITP2501624

Solar Collector Materials Exposure to the IPH Site Environment Task 5.0; Final Report, Sandia National Laboratories/Albuquerque, SAND81-7029, Morris, V. L. (Jul 1982) 79 pp. NTIS Order No. DE83002192

Fatigue and Creep-Fatigue Testing of Steam-Filled Tubular Alloy 800 Specimens, Sandia National Laboratories/Albuquerque, SAND82-0850, Jones, W. B., Van Den Avyle, J. A. (May 1982) 49 pp. NTIS Order No. DE82019220

Low-Cycle Fatigue and Creep-Fatigue Testing of Salt-Filled Alloy 800 Specimens; Final Report, Sandia National Laboratories/Albuquerque, SAND82-8182, Kaae, J. L. (May 1982) 27 pp. NTIS Order No. DE82015730

Use of FTIR Reflection-Absorbance Spectroscopy to Study Photochemical Degradation of Polymeric Coatings on Mirrors, SERI/TP-255-1513, Webb, J. D., Schissel, P. O., Czanderna, A. W., Smith, D. M., Chughtai, A. R. (May 1982) 7 pp. NTIS Order No. DE82015006

Development of a Long-Life High-Temperature Catalyst for the SO₂/SO₃ Energy Storage System, Sandia National Laboratories/Livermore, SAND81-8182, Schmidt, E. W., Day, D. J., Fairfull, G. S., Gates, D. H., Li, C. H., Poole, D. R. (Mar 1982) 134 pp. NTIS Order No. DE82009723

Stress Corrosion of a High-Transmittance Glass for Solar Applications, SERI/TP-255-1507, Coyle, R. T., McFadden, J. D. (Mar 1982) 20 pp. NTIS Order No. DE82009721

Thermal Fatigue Test of "Solar One" Receiver-Tube Weldments, Sandia National Laboratories/Livermore, SAND82-8206, Hughes, D. A. (Mar 1982) 33 pp. NTIS Order No. DE82012520

Deformation of a Thin, Elastic Plate to a Deep Parabolic Cylinder, Sandia National Laboratories/Albuquerque, SAND82-0099, Reuter, R. C., Jr., Wilson, R. K. (Feb 1982) 22 pp. NTIS Order No. DE82012056

Interfaces in Solar Energy Materials, SERI/TP-255-1499, Czanderna, A. W. (Feb 1982) 16 pp. NTIS Order No. DE82008680

Thermal-Convection-Loop Corrosion Tests of 316SS and IN800 in Molten Nitrate Salts, Sandia National Laboratories/Livermore, SAND82-8210, Bradshaw, R. W. (Feb 1982) 31 pp. NTIS Order No. DE82012313

Contact Stresses on a Thin Plate After Large Displacements to a Half Parabolic Surface, Sandia National Laboratories/Albuquerque, SAND81-2563, Wilson, R. K., Reuter, R. C., Jr. (Jan 1982) 30 pp. NTIS Order No. DE82006998

High Temperature Materials Experience at the Central Receiver Test Facility, Sandia National Laboratories/Albuquerque, SAND82-0263C, Holmes, J. T. (Jan 1982) 14 pp. NTIS Order No. DE82010356

Slow Strain-Rate Testing of Alloy 800 in Molten-Nitrate Salts, Sandia National Laboratories/Livermore, SAND82-8201, Goods, S. H. (Jan 1982) 32 pp. NTIS Order No. DE82011015

Solar Collector Materials Exposure to the IPH Site Environment; Final Report, Volume 1, Sandia National Laboratories/Albuquerque, SAND81-7028/1, Morris, V. L. (Jan 1982) 115 pp. NTIS Order No. DE82011696

Stability of Reflectors with Polymeric Coatings, SERI/TP-255-1497, Czanderna, A. W., Schissel, P. O. (Jan 1982) 19 pp. NTIS Order No. DE82007774

Collectors, Concentrators, and Reflectors

Solar Thermal Technology Program Bibliography, 1973-1985, SERI/SP-272-3008, (Dec 1986) 192 pp. NTIS Order No. DE86010728

Heat Engine Development for Solar Thermal Dish-Electric Power Plants, Sandia National Laboratories/Albuquerque, SAND86-0289, Linker, K. L. (Nov 1986) 33 pp. NTIS Order No. DE87003583

Structural Design Considerations for Stretched-Membrane Heliostat Reflector Modules with Stability and Initial Imperfection Considerations, SERI/TR-253-2338, Murphy, L. M., Simms, D. A., Sallis, D. V. (Oct 1986) 70 pp. NTIS Order No. DE87001102

Environmental Analysis of Solar Bowl Technology, DOE/AL/21557-T6, Urban, L. V. (Aug 1986) 302 pp. NTIS Order No. DE86015367

Wind Load Reduction for Heliostats; A Subcontract Report, SERI/STR-253-2859, Peterka, J. A., Hosoya, N., Bienkiewicz, B., Cermak, J. E. (May 1986) 241 pp. NTIS Order No. DE86010703

Evaluation of Heliostat Field/Receiver Configurations, Sandia National Laboratories/Livermore, SAND86-8007, Faas, S. E., Winters, W. S. (Mar 1986) 75 pp. NTIS Order No. DE86009875

Mirror Panel Layouts for an Icosahedral Solar Bowl; The Crosbyton Solar Power Project, DOE/AL/21557-T8, Anderson, R. M., Barnard, R. W., Ford, W. T. (Mar 1986) 239 pp. NTIS Order No. DE86015564

Parabolic Dish Module Experiment; Final Test Report, Sandia National Laboratories/Albuquerque, SAND85-7007 (Mar 1986) 206 pp. NTIS Order No. DE86009819

Single, Stretched Membrane, Structural Module Experiments, SERI/TR-253-2736, Wood, R. L. (Feb 1986) 58 pp. NTIS Order No. DE86004433

Energy and Availability Transport Losses in a Point-Focus Solar Concentrator Field, Sandia National Laboratories/Albuquerque, SAND86-0004C, Stine, W. B., Heckes, A. A. (1986) 7 pp. NTIS Order No. DE86010482

Heat Engine Development for Solar Thermal Dish-Electric Power Plants, Sandia National Laboratories/Albuquerque, SAND86-0289C, Linker, K. L. (1986) 16 pp. NTIS Order No. DE86009377

System Performance Analysis of Stretched Membrane Heliostats, SERI/TP-253-2819, Anderson, J. V., Murphy, L. M., Short, W. D., Wendelin, T. J. (Dec 1985) 6 pp. NTIS Order No. DE85016885

System Performance and Cost Sensitivity Comparisons of Stretched Membrane Heliostat Reflectors with Current Generation Glass/Metal Concepts, SERI/TR-253-2694, Murphy, L. M., Anderson, J. V., Short, W. D., Wendelin, T. J. (Dec 1985) 92 pp. NTIS Order No. DE85016892

Variational Approach for Predicting the Load Deformation Response of a Double Stretched Membrane Reflector Module, SERI/TR-253-2626, Murphy, L. M. (Oct 1985) 60 pp. NTIS Order No. DE85016873

10-MW_e Solar Thermal Central Receiver Pilot Plant Mirror Module Corrosion, Torque Tube Damage, and Mirror Reflectance Survey, July 1984, Sandia National Laboratories/Livermore, SAND85-8225, Decker, E. V., Lopez, C. W., Mavis, C. L., Noring, J. E. (Jul 1985) 37 pp. NTIS Order No. DE85016226

Silver/Glass Mirrors for Solar Thermal Systems, SERI/SP-271-2293 (Jun 1985) 70 pp. NTIS Order No. DE85000537/XAB

Wind Loading on Solar Collectors, SERI/TR-253-2169, Bhaduri, S., Murphy, L. M. (Jun 1985) 50 pp. NTIS Order No. DE85012151

Silver-Silicon Bonding on Silica Surfaces, SERI/TR-255-2410, Pitts, J. R. (Apr 1985) 253 pp. NTIS Order No. DE85012138

Shenandoah Parabolic Dish Solar Collector, Sandia National Laboratories/Albuquerque, SAND83-0583, Kinoshita, G. S. (Jan 1985) 105 pp. NTIS Order No. DE85008326

Development and Testing of Parabolic Dish Concentrator No. 1, Jet Propulsion Laboratory, DOE/JPL-1060-81, Dennison, E. W., Thostesen, T. O. (Dec 1984) 38 pp. NTIS Order No. DE85014500

Plastic Heliostat and Heliostat Enclosure Analysis; Final Report, Sandia National Laboratories/Livermore, SAND81-8188, Berry, M. J. (Dec 1984) 187 pp. NTIS Order No. DE85009112

- User's Manual for the University of Houston Individual Heliostat Layout and Performance Code**, Sandia National Laboratories/Albuquerque, SAND84-8187, Laurence, C. L., Lipps, F. W. (Dec 1984) 235 pp. NTIS Order No. DE85004643
- Concentrator Optical Characterization Using Computer Mathematical Modelling and Point Source Testing**, Jet Propulsion Laboratory, DOE/JPL-1060-77, Dennison, E. W., John, S. L., Trentelman, G. F. (Sep 1984) 41 pp. NTIS Order No. DE85004582
- Nonlinear Thermoelastic Stress Analysis of Spherically Curved Solar Panels**, DOE/AL/21557-T3, Vallabhan, C. V. G., Vungutur, K., Selvam, R. P. (Oct 1984) 89 pp. NTIS Order No. DE86000001
- Effective Antireflection Coatings of Transparent Polymeric Materials by Gas-Phase Surface Fluorination**, SERI/TP-255-2387, Jorgensen, G. J., Schissel, P. O. (Jul 1984) 7 pp. NTIS Order No. DE84013027
- 10-MW_e Solar Thermal Central Receiver Pilot Plant; Beam Safety Tests and Analyses**, Sandia National Laboratories/Livermore, SAND83-8035, Brumleve, T. D. (Jul 1984) 96 pp. NTIS Order No. DE84015466
- Analytical Modeling and Structural Response of a Stretched-Membrane Reflective Module**, SERI/TR-253-2101, Murphy, L. M., Sallis, D. V. (Jun 1984) 52 pp. NTIS Order No. DE84013004
- Assessment of Solar Thermal Concentrator Research and Development**, Sandia National Laboratories/Livermore, SAND84-8228, Radosevich, L. G., Caputo, R. S. (Jun 1984) 49 pp. NTIS Order No. DE84014461
- Nomographic Methodology for Use in Performance Trade-Off Studies of Parabolic Dish Solar Power Modules**, Jet Propulsion Laboratory, DOE/JPL-1060-74, Selcuk, M. K., Fujita, T. (Jun 1984) 61 pp. NTIS Order No. DE85000323
- Wind Loading on Solar Concentrators; Some General Considerations**, Jet Propulsion Laboratory, DOE/JPL-1060-66, Roschke, E. J. (May 1984) 153 pp. NTIS Order No. DE85000337
- 10-MW_e Solar Thermal Central Receiver Pilot Plant Mirror Module Corrosion Survey**, Sandia National Laboratories/Livermore, SAND84-8214, Noring, J. E., Mavis, C. L., Decker, E. V., Skvarna, P. E. (Mar 1984) 52 pp. NTIS Order No. DE84009311
- Atmospheric Transmittance Model for a Solar Beam Propagating between a Heliostat and a Receiver**, Sandia National Laboratories/Livermore, SAND83-8177, Pitman, C. L., Vant-Hull, L. L. (Feb 1984) 76 pp. NTIS Order No. DE84007980
- Technical and Cost Potential for Lightweight, Stretched-Membrane Heliostat Technology**, SERI/TP-253-2079, Murphy, L. M. (Jan 1984) 8 pp. NTIS Order No. DE84004433
- Solar Bowl Research Results (February 1983–May); Results on Solar Bowl Technology**, DOE/AL/21557-T4 (1984) 127 pp. NTIS Order No. DE85018564
- Solar Thermal Technology Program; Polymer Synthesis and Characterization Subtask Annual Progress Report FY 1983**, SERI/PR-255-2148, Schissel, P. O., Neidlinger, H. H. (Dec 1983) 56 pp. NTIS Order No. DE84000094
- Experimental Approach to Evaluating Environmental Degradation Mechanisms in Bisphenol-A Polycarbonate Films on Metallic Substrates**, SERI/TR-255-1602, Webb, J. D. (Nov 1983) 119 pp. NTIS Order No. DE84000025
- JPL Tests of a LaJet Concentrator Facet**, Jet Propulsion Laboratory, DOE/JPL-1060-64, Dennison, E. W., Argoud, M. J. (Nov 1983) 16 pp. NTIS Order No. DE84008507
- Low-Temperature IPH Parabolic Troughs; Design Variations and Cost-Reduction Potential**, SERI/TR-253-1662, Gee, R. C. (Nov 1983) 42 pp. NTIS Order No. DE84000024
- Performance Tests of the Solar Steam, Inc., 9-m Deep-Dish Solar Concentrating Collector**, SERI/TR-255-1505, Masterson, K. D., Gaul, H. W. (Nov 1983) 48 pp. NTIS Order No. DE84000079
- Wind Load and Life-Cycle Testing of Second Generation Heliostats**, Sandia National Laboratories/Livermore, SAND82-8036, Rorke, W. S., Jr. (Nov 1983) 163 pp. NTIS Order No. DE84003333
- Advanced Concentrator Research; Two Examples**, SERI/TP-253-2106, Murphy, L. M. (Oct 1983) 8 pp. NTIS Order No. DE84000015
- Structural Analysis of a Glass/Space Frame Parabolic-Trough Solar Collector for Various Operating Positions**, Sandia National Laboratories/Albuquerque, SAND82-1040, Koterak, J. R. (Oct 1983) 33 pp. NTIS Order No. DE84001137

Polymer Degradation on Reflecting Metal Films; Fourier Transform Infrared (FTIR) Reflection-Absorbance Studies, SERI/TP-255-2054, Webb, J. D., Schissel, P. O., Thomas, T. M., Pitts, J. R., Czanderna, A. W. (Jul 1983) 7 pp. NTIS Order No. DE83012129

Monograph Series, No. 1; 10-MW_e Solar Thermal Central Receiver Pilot Plant Heliostat Experiences November 1981-February 1983, Sandia National Laboratories/Livermore, SAND83-8220, Mavis, C. L. (May 1983) 27 pp. NTIS Order No. DE83012612

Technical and Cost Benefits of Lightweight, Stretched-Membrane Heliostats, SERI/TR-253-1818, Murphy, L. M. (May 1983) 41 pp. NTIS Order No. DE83009408

Final Report on Test of STEP, Shenandoah Parabolic Dish Solar Collector Quadrant Facility, Sandia National Laboratories/Albuquerque, SAND82-7153, Saydah, A. R., Koenig, A. A., Lambert, R. H., Kugath, D. A. (Apr 1983) 135 pp. NTIS Order No. DE83017712

Glass/Space Frame Solar Collector Development, Sandia National Laboratories/Albuquerque, SAND82-7039, Biester, A. W. (Mar 1983) 55 pp. NTIS Order No. DE83009002

Influence of Adhesive Shear Deformation on Laminate Structural Behavior with Application to Parabolic Trough Solar Collectors, Sandia National Laboratories/Albuquerque, SAND82-1825, Clauss, D. B., Reuter, R. C., Jr. (Feb 1983) 49 pp. NTIS Order No. DE83010293

Testing of a Prototype Fresnel Lens Concentrator for Thermal Applications, SERI/TP-253-1893, Lewandowski, A. A. (Feb 1983) 7 pp. NTIS Order No. DE83007312

Development of a Portable Specular Reflectometer for Monitoring Solar-Mirror Materials, Sandia National Laboratories/Albuquerque, SAND83-0912C, Pettit, R. B., Freese, J. M., Mahoney, A. R. (1983) 29 pp. NTIS Order No. DE83016065

Development of a Consensus Standard for Determining Thermal Performance of High Concentration Ratio Solar Collectors, SERI/TP-253-1839, Blackmon, J. B., Linskens, M. C., Reed, K. A. (Dec 1982) 5 pp. NTIS Order No. DE83005129

Experimental Results of Pitching Moment Tests on Parabolic-Trough Solar-Collector Array Configurations, Sandia National Laboratories/Albuquerque, SAND82-1569, Randall, D. E., Tate, R. E., Powers, D. A. (Dec 1982) 37 pp. NTIS Order No. DE83006027

Manufacturing and Cost Analysis of Heliostats Based on the Second Generation Heliostat Development Study, Sandia National Laboratories/Livermore, SAND82-8007, Norris, H. F., Jr., White, S. S. (Dec 1982) 326 pp. NTIS Order No. DE83006664

Characterizing Solar Mirror Materials Using Portable Reflectometers, Sandia National Laboratories/Albuquerque, SAND82-1714, Pettit, R. B. (Sep 1982) 23 pp. NTIS Order No. DE83000804

Heliostat Washing Equipment Requirements (RADL Item 7-17); 10-MW_e Solar-Thermal Central-Receiver Pilot Plant: Solar-Facilities Design Integration, Sandia National Laboratories/Livermore, DOE/SF/10499-46 (Sep 1982) 28 pp. NTIS Order No. DE83001673

Scatterplate Flux Mapping for Solar Concentrators, SERI/TR-255-1432, Masterson, K. D., Bohn, M. S. (Sep 1982) 20 pp. NTIS Order No. DE82021359

Status Report on Testing of Advanced Mirrors, SERI/RR-255-1630, Jorgensen, G. J. (Sep 1982) 16 pp. NTIS Order No. DE82022184

Beam Quality and Tracking-Accuracy Evaluation of Second-Generation and Barstow Production Heliostats, Sandia National Laboratories/Albuquerque, SAND82-0181, King, D. L. (Aug 1982) 129 pp. NTIS Order No. DE82022224

Structural Design Considerations for a Line-Focus Reflective Module Using Inexpensive Composite Materials, SERI/TR-253-1450, Murphy, L. M. (Aug 1982) 61 pp. NTIS Order No. DE82021611

Development Effort on Sheet Molding Compound (SMC) Parabolic Trough Panels, Sandia National Laboratories/Albuquerque, SAND81-7037, Kirsch, P. A. (Jul 1982) 103 pp. NTIS Order No. DE83000392

Development of Sheet Metal Parabolic Trough Reflector Panels, Sandia National Laboratories/Albuquerque, SAND81-7038, Biester, A. W. (Jun 1982) 77 pp. NTIS Order No. DE82016377

Experimental Performance Evaluation of Line-Focus Sun Trackers, SERI/TR-632-646, Gee, R. C. (May 1982) 67 pp. NTIS Order No. DE82015142

Optimization of Dish Solar Collectors with and without Secondary Concentrators, Jet Propulsion Laboratory, DOE/JPL-1060-57, Jaffe, L. D. (May 1982) 128 pp. NTIS Order No. DE83007266

Optimization of the Second Generation Heliostat and Specification, Sandia National Laboratories/Livermore, SAND82-8181, Dietrich, J. J., Knowles, R. K., Stone, K. W., Steinmeyer, D. A., Nourse, J. H. (May 1982) 168 pp. NTIS Order No. DE82018317

Second Generation Heliostat Optimization Studies, Sandia National Laboratories/Livermore, SAND82-8175 (May 1982) 112 pp. NTIS Order No. DE82017058

Solar Hemispherical Reflectometer Modification for Second-Surface Mirror Measurements, Sandia National Laboratories/Albuquerque, SAND82-0934, Mahoney, A. R. (May 1982) 28 pp. NTIS Order No. DE82016913

Stress Analysis of Spherical Mirror Panels, Sandia National Laboratories/Albuquerque, SAND82-7116, Parks, V. J., Sanford, R. J. (Apr 1982) 48 pp. NTIS Order No. DE82015656

Effects of Gaps in Adhesives That Bond Elastically Deformed Panels to Parabolic, Cylindrical Substructures, Sandia National Laboratories/Albuquerque, SAND82-0291, Wilson, R. K., Reuter, R. C., Jr. (Mar 1982) 35 pp. NTIS Order No. DE82014720

Experimental and Analytical Results for the Structural Behavior of the Sheet Metal Parabolic Solar Collector, Sandia National Laboratories/Albuquerque, SAND82-0045A, Lewis, B. A. (Mar 1982) 39 pp. NTIS Order No. DE82013527

Flow Instability During Direct Steam Generation in a Line-Focus Solar Collector System, SERI/TR-632-1354, Pederson, R. J., May, E. K. (Mar 1982) 32 pp. NTIS Order No. DE82012887

Hemispherical Bowl Cost Estimating Study, Sandia National Laboratories/Albuquerque, SAND82-7111 (Mar 1982) 33 pp. NTIS Order No. DE82014615

Performance Testing of the Acurex Solar Collector Model 3001-03, Sandia National Laboratories/Albuquerque, SAND80-0872, Dudley, V. E., Workhoven, R. M. (Mar 1982) 121 pp. NTIS Order No. DE82013389

Performance Testing of the Suntec 9-ft Sagged Glass Solar Collector, Sandia National Laboratories/Albuquerque, SAND81-0370, Dudley, V. E., Workhoven, R. M. (Mar 1982) 95 pp. NTIS Order No. DE82018441

Deformation of a Thin, Elastic Plate to a Deep Parabolic Cylinder, Sandia National Laboratories/Albuquerque, SAND82-0099, Reuter, R. C., Jr., Wilson, R. K. (Feb 1982) 22 pp. NTIS Order No. DE82012056

Program for Predicting Thermal Performance Based on Test Data of Low- to Medium-Temperature Line-Focusing, Concentrating Solar Collectors, Sandia National Laboratories/Albuquerque, SAND82-0092/1, Harrison, T. D. (Feb 1982) 18 pp. NTIS Order No. DE82012605

Contact Stresses on a Thin Plate After Large Displacements to a Half Parabolic Surface, Sandia National Laboratories/Albuquerque, SAND81-2563, Wilson, R. K., Reuter, R. C., Jr. (Jan 1982) 30 pp. NTIS Order No. DE82006998

Dish Concentrators for Solar Thermal Energy: Status and Technology Development, Jet Propulsion Laboratory, DOE/JPL-1060-48, Jaffe, L. D. (Jan 1982) 66 pp. NTIS Order No. DE82016006

Economic and Performance Potential of Selected Improvements to Parabolic Troughs, SERI/TP-632-1319-Conference Version, Gee, R. C., Murphy, L. M. (Jan 1982) 7 pp. NTIS Order No. DE82010402

Second Generation Heliostat Evaluation; Executive Summary, Sandia National Laboratories/Livermore, SAND81-8033 (Jan 1982) 28 pp. NTIS Order No. DE82010261

Second-Generation Heliostat Evaluation; Summary Report, Sandia National Laboratories/Livermore, SAND81-8034 (Jan 1982) 50 pp. NTIS Order No. DE82010684

Solar Collector Materials Exposure to the IPH Site Environment; Final Report, Volume 1, Sandia National Laboratories/Albuquerque, SAND81-7028/1, Morris, V. L. (Jan 1982) 115 pp. NTIS Order No. DE82011696

Testing and Evaluation of Second Generation Heliostat Mirror Modules, Sandia National Laboratories/Livermore, SAND81-8263, Burolla, V. P., Delameter, W. R. (Jan 1982) 142 pp. NTIS Order No. DE82007934

Receivers

Experimental Investigation of the Direct Absorption Receiver Concept, SERI/TP-252-2974, Bohn, M. S. (Dec 1986) 12 pp. NTIS Order No. DE87001126

Review of the Molten Salt Electric Experiment: A Solar Central Receiver Project, Sandia National Laboratories/Livermore, SAND86-8249, Delameter, W. R., Bergan, N. E. (Dec 1986) 34 pp. NTIS Order No. DE87003592

Solar Thermal Technology Program Bibliography, 1973-1985, SERI/SP-272-3008 (Dec 1986) 192 pp. NTIS Order No. DE86010728

10-MW_e Solar Thermal Central Receiver Pilot Plant Control System Description, Sandia National Laboratories/Livermore, SAND86-8187 (Dec 1986) 147 pp. NTIS Order No. DE87005582

Experiments and Analysis on the Molten-Salt Direct-Contact Absorption Receiver Concept, SERI/TP-252-3013, Bohn, M. S., Wang, K. Y. (Nov 1986) 9 pp. NTIS Order No. DE87001123

User's Manual for DELSOL3: A Computer Code for Calculating the Optical Performance and Optimal System Design for Solar Thermal Central Receiver Plants, Sandia National Laboratories/Livermore, SAND86-8018, Kistler, B. L. (Nov 1986) 231 pp. NTIS Order No. DE87003598

Assessment of Solar Central Receiver Systems for Fuels and Chemicals Applications, Sandia National Laboratories/Livermore, SAND86-8019, Radosevich, L. G., Pretzel, C. W., Carrell, E. H., Tyner, C. E. (Oct 1986) 78 pp. NTIS Order No. DE87002744

Direct Absorption Receiver Experiments and Concept Feasibility, SERI/TR-252-2884, Bohn, M. S., Green, H. J., Yeagle, G., Siebarth, J., Asbell, O. D., Brown, C. T. (Oct 1986) 143 pp. NTIS Order No. DE87001117

Testing of the Molten Salt Electric Experiment Solar Central Receiver in an External Configuration, Sandia National Laboratories/Livermore, SAND86-8010, Bergan, N. E. (Oct 1986) 80 pp. NTIS Order No. DE87002745

Application of Reliability-Centered Maintenance to Solar Central Receiver Plants, Sandia National Laboratories/Livermore, SAND86-8177, Matteson, T. D., Smith, A. M. (Sep 1986) 63 pp. NTIS Order No. DE87000284

10-MW_e Solar Thermal Central Receiver Pilot Plant Control System Evaluation, Sandia National Laboratories/Livermore, SAND86-8239, Tanner, D. N. (Sep 1986) 77 pp. NTIS Order No. DE87002370

Solar Thermal Central Receiver Technology Transfer Strategy Analysis; Executive Summary, Sandia National Laboratories/Livermore, SAND86-8184-Exec.Summ, Bos, P. B., Doyle, J. F. (Aug 1986) 69 pp. NTIS Order No. DE87000275

Solar Thermal Central Receiver Technology Transfer Strategy Analysis; Final Report, Sandia National Laboratories/Livermore, SAND86-8184, Bos, P. B., Doyle, J. F. (Aug 1986) 162 pp. NTIS Order No. DE87000276

10-MW_e Solar Thermal Central Receiver Pilot Plant: Modes 2, 3, 4, and 7 (Tests 1120, 1130, 1140, and 1170) Test Report, Sandia National Laboratories/Livermore, SAND86-8182 (Aug 1986) 314 pp. NTIS Order No. DE87001844

Direct Absorption Receiver Research, SERI/TP-250-2969, Gupta, B. P., Bohn, M. S. (Jul 1986) 11 pp. NTIS Order No. DE86010716

Preliminary Assessment of the Potential for Integrating Solar Thermal Central Receiver Technology with Fuels and Chemicals Processes, Sandia National Laboratories/Livermore, SAND85-8183, Brown, D. R., Sealock, L. J., Mudge, L. K., Dodge, R. E., Garrett-Price, B. A., Griffin, E. A., Hauser, S. G., Johnson, B. M., Reis, J. W., Weakley, S. A. (Jul 1986) 134 pp. NTIS Order No. DE86014092

Reliability Study of Solar One; the Central Receiver Pilot Plant, Sandia National Laboratories/Albuquerque, SAND85-2422, Nagel, J. F. (Jul 1986) 123 pp. NTIS Order No. DE86014082/XAB

Solar One Solar Thermal Central Receiver Pilot Plant 1984 Meteorological Data Report; Draft, Sandia National Laboratories/Livermore SAND86-8181 (Jul 1986) 358 pp. NTIS Order No. DE86016039

Utilizing Spreadsheets for Analyzing Solar Thermal Central Receiver Power Plant Designs, Sandia National Laboratories/Livermore, SAND86-8011, Norris, H. F., Jr. (Jul 1986) 73 pp. NTIS Order No. DE86013372

Monograph Series No. 3; 10-MW_e Solar Thermal Central Receiver Pilot Plant Receiver Solar Absorbance Measurements and Results, Sandia National Laboratories/Livermore, SAND86-8210, Baker, A. F. (Jun 1986) 40 pp. NTIS Order No. DE86011910

10-MW_e Solar Thermal Central Receiver Pilot Plant Mode 5 (Test 1150) and Mode 6 (Test 1160) Test Report, Sandia National Laboratories/Livermore, SAND86-8175 (Jun 1986) 230 pp. NTIS Order No. DE86012006

10-MW_e Solar Thermal Central Receiver Pilot Plant; Thermal Storage Subsystem Evaluation; Final Report, Sandia National Laboratories/Livermore, SAND86-8212, Faas, S. E., Thorne, L. R., Fuchs, E. A., Gilbertsen, N. D. (Jun 1986) 113 pp. NTIS Order No. DE86011730

CLEA: The Closed Loop Efficiency Analysis Facility for Thermochemical Energy Transport Studies, Sandia National Laboratories/Albuquerque, SAND86-0590, Hawn, D. C., Fish, J. D. (May 1986) 69 pp. NTIS Order No. DE86011992

Optical Characterization of Solid Particle Solar Central Receiver Materials, Sandia National Laboratories/Albuquerque, SAND85-1215, Stahl, K. A., Griffin, J. W., Matson, B. S., Pettit, R. B. (May 1986) 117 pp. NTIS Order No. DE86011908

Total Capital Cost Data Base: 10-MW_e Solar Thermal Central Receiver Pilot Plant, Sandia National Laboratories/Livermore, SAND86-8002, Norris, H. F., Jr. (May 1986) 118 pp. NTIS Order No. DE86011388

Review of Thermal Loss Evaluations of Solar Central Receivers, Sandia National Laboratories/Livermore, SAND85-8019, Boehm, R. F. (Apr 1986) 38 pp. NTIS Order No. DE86010779

Solar Stirling Receiver Alternatives for the Terrestrial Solar Application, Jet Propulsion Laboratory, DOE/JPL-1060-96, Stearns, J. (Apr 1986) 30 pp. NTIS Order No. DE87005431

Evaluation of Heliostat Field/Receiver Configurations, Sandia National Laboratories/Livermore, SAND86-8007, Faas, S. E., Winters, W. S. (Mar 1986) 75 pp. NTIS Order No. DE86009875

Falling Film Flow Characteristics of the Direct Absorption Receiver, SERI/TR-252-2641, Newell, T. A., Wang, K. Y., Copeland, R. J. (Mar 1986) 57 pp. NTIS Order No. DE86004432

Solar Thermal Central Receiver Integrated Commercialization Analysis; Final Report, Volume 2—Appendices, Sandia National Laboratories/Livermore, SAND86-8176-Vol.2-App, Doyle, J. F., Bos, P. B., Weingart, J. M., Kelly, B. (Mar 1986) 92 pp. NTIS Order No. DE86011916

Solar Thermal Central Receiver Integrated Commercialization Analysis; Final Particle Solar Central Receiver for High Temperature Applications, Sandia National Laboratories/Livermore, SAND86-8211, Hruby, J. M. (Mar 1986) 75 pp. NTIS Order No. DE86008793

Convective Loss Measurements at the 10-MW_e Solar Thermal Central Receiver Pilot Plant, Sandia National Laboratories/Livermore, SAND85-8250, Stoddard, M. C. (Jan 1986) 90 pp. NTIS Order No. DE86006651

Monograph Series, No. 4; 10-MW_e Solar Thermal Central Receiver Pilot Plant Heliostat Field Aimpoint Improvements, Sandia National Laboratories/Livermore, SAND85-8244, Baker, A. F., Atwood, D. L. (Jan 1986) 36 pp. NTIS Order No. DE86005867

10-MW_e Solar Thermal Central Receiver Pilot Plant; 1983 Operational Test Report, Sandia National Laboratories/Livermore, SAND86-8203, Bartel, J. J. (Jan 1986) 106 pp. NTIS Order No. DE86006183

Integrated Heat Pipe-Thermal Storage Design for a Solar Receiver, Los Alamos National Laboratory, LA-UR-86-1840, Keddy, E. S., Sena, J. T., Woloshun, K., Merrigan, M. A., Heidenreich, G. (1986) 8 pp. NTIS Order No. DE86011235

Electric Heating for High-Temperature Heat Transport Fluids, Sandia National Laboratories/Albuquerque, SAND85-0379, Holmes, J. T. (Dec 1985) 17 pp. NTIS Order No. DE86004975

Numerical Modeling of a Solid Particle Solar Central Receiver, Sandia National Laboratories/Livermore, SAND85-8249, Evans, G. H., Houf, W. G., Greif, R., Crowe, C. (Dec 1985) 63 pp. NTIS Order No. DE86005066

Proceedings of the Department of Energy Solar Central Receiver Technology Annual Meeting, Sandia National Laboratories/Livermore, SAND85-8241 (Dec 1985) 543 pp. NTIS Order No. DE86006320

SOLAVG: Radially Averaged Optical Power Ratio Calculations; the Crosbyton Solar Power Project, DOE/AL/21557-T5, Ford, W. T., Anderson, R. M. (Aug 1985) 155 pp. NTIS Order No. DE86004960

Molten Salt Electric Experiment (MSEE); Phase I Report, Volume I, Sandia National Laboratories/Livermore, SAND85-8175-Vol. 1 (Aug 1985) 56 pp. NTIS Order No. DE86001118

Molten Salt Electric Experiment (MSEE); Phase I Report, Volume III, Sandia National Laboratories/Livermore, SAND85-8175-Volume 3 (Aug 1985) 565 pp. NTIS Order No. DE86001120

Numerical Simulation of Buoyant Turbulent Flow, Sandia National Laboratories/Livermore, SAND85-8180, Humphrey, J. A. C., Sherman, F. S., To, W.-M. (Aug 1985) 189 pp. NTIS Order No. DE85017392

Optical Properties of High-Temperature Materials for Direct Absorption Receivers, SERI/TP-255-2791, Jorgensen, G. J., Schissel, P. O., Burrows, R. W. (Aug 1985) 8 pp. NTIS Order No. DE85012171

Analysis and Design of the Volumetric Air Heating Receiver, Sandia National Laboratories/Livermore, SAND84-8190 (Jul 1985) 185 pp. NTIS Order No. DE85016092

Film Flow Characteristics for Direct Absorption Solar Receiver Surfaces, SERI/TP-252-2770, Newell, T. A., Wang, K. Y., Copeland, R. J. (Jul 1985) 8 pp. NTIS Order No. DE85012175

Cloud Shading Direct Solar Radiation Model for the Crosbyton Solar Power Project, DOE/AL/21557-T2, Peterson, R. E., Smalley, D. J. (Jun 1985) 123 pp. NTIS Order No. DE86000002

Corrosion of Materials in Molten Alkali Carbonate Salt at 900°C, SERI/TR-255-2553, Coyle, R. T., Thomas, T. M., Schissel, P. O. (Jun 1985) 40 pp. NTIS Order No. DE85012158

Laboratory Measurements of a Direct-Contact Heat Exchanger; Final Subcontract Report, SERI/STR-252-2678, Boehm, R. F. (Jun 1985) 46 pp. NTIS Order No. DE85012146

10-MW_e Solar Thermal Central Receiver Pilot Plant Design Day Performance Monograph, Sandia National Laboratories/Livermore, SAND85-8207, Yang, C. L. (Jun 1985) 31 pp. NTIS Order No. DE85015663

High Temperature Molten Salt Containment, SERI/TR-252-2490, Wang, K. Y., West, R. E., Kreith, F., Lynn, P. P. (May 1985) 64 pp. NTIS Order No. DE85012152

Monograph Series No. 2; 10-MW_e Solar Thermal Central Receiver Pilot Plant and Receiver Performance Evaluation, Sandia National Laboratories/Livermore, SAND85-8224, Baker, A. F., Atwood, D. L. (May 1985) 54 pp. NTIS Order No. DE85012536

Theory of Cellwise Optimization for Solar Central Receiver Systems, Sandia National Laboratories/Livermore, SAND85-8177, Lipps, F. W. (May 1985) 80 pp. NTIS Order No. DE85012586

10-MW_e Solar Thermal Central Receiver Pilot Plant; 1984 Summer Solstice Power Production Test, Sandia National Laboratories/Livermore, SAND85-8216, Carrell, E. H. (May 1985) 61 pp. NTIS Order No. DE85012588

10-MW_e Solar Thermal Central Receiver Pilot Plant Maintenance Experience, January 1982–March 1983, Sandia National Laboratories/Livermore, SAND85-8211, Smith, J. W. (May 1985) 39 pp. NTIS Order No. DE85012587

Direct Absorption Receiver, SERI/TP-252-2656, Bohn, M. S. (Apr 1985) 8 pp. NTIS Order No. DE85008789

Direct Absorption Receiver System Studies, SERI/TP-253-2709, Lewandowski, A. A. (Apr 1985) 11 pp. NTIS Order No. DE85008801

Experimental Study of Free and Fixed Convective Flow of Air in a Heated Cavity, Sandia National Laboratories/Livermore, SAND84-8192, Humphrey, J. A. C., Sherman, F. S., Chen, K.-S. (Apr 1985) 292 pp. NTIS Order No. DE85012538

Feasibility Study of Front Surface Central Receiver Temperature Measurements Using Infra-red Thermography, Sandia National Laboratories/Albuquerque, SAND83-8034, Abrahams, D. M. (Apr 1985) 32 pp. NTIS Order No. DE86015418/XAB

Fluids and Containment Materials Compatibility Research, SERI/TP-255-2699, Coyle, R. T., Thomas, T. M., Schissel, P. O. (Apr 1985) 10 pp. NTIS Order No. DE85008785

Proceedings of the Distributed Receiver Solar Thermal Technology Conference; Albuquerque, New Mexico; April 24–25, 1985, Sandia National Laboratories/Albuquerque, SAND84-2454, Muir, J. F. (Apr 1985) 269 pp. NTIS Order No. DE85010551

Thermal Performance and Design of a Solid Particle Cavity Receiver, Sandia National Laboratories/Livermore, SAND85-8206, LaJeunesse, C. A. (Apr 1985) 66 pp. NTIS Order No. DE85010830

Receiver Loss Study; Optics of Optimized Solar Central Receiver Systems as a Function of Receiver Thermal Loss per Unit Area; Final Report, Sandia National Laboratories/Livermore, SAND85-8176, Pitman, C. L., Vant-Hull, L. L. (Mar 1985) 93 pp. NTIS Order No. DE85010831

Assessment of a Solid Particle Receiver for a High Temperature Solar Central Receiver System, Sandia National Laboratories/Livermore, SAND85-8208, Falcone, P. K., Noring, J. E., Hraby, J. M. (Feb 1985) 93 pp. NTIS Order No. DE85008028

Proceedings of the Department of Energy Solar Central Receiver Annual Meeting; San Diego, California, April 24-26, 1984, Sandia National Laboratories/Livermore, SAND85-8202 (Feb 1985) 255 pp. NTIS Order No. DE85009114

Particle Curtain Generator for Optical Property Measurements of Solid Particles, Sandia National Laboratories/Livermore, SAND84-8255, Prescott, G. H., Steele, B. R. (Jan 1985) 10 pp. NTIS Order No. DE85005784

Small Central Receiver Brayton Cycle Study; Final Technical Report, December 1, 1982-June 30, 1983, Sandia National Laboratories/Livermore, SAND84-8189 (Jan 1985) 320 pp. NTIS Order No. DE85008882

10-MW_e Solar Pilot Plant, Daggett, California; Receiver Steam Generation (Controls) Preoperational Test, Procedure 1030; Revision 0, Section 10, Attachments, Sandia National Laboratories/Livermore, DOE/SF/10499-T140, Raetz, J. E., Riel, E. J. (1985) 185 pp. NTIS Order No. DE86000706

Solid Particle Receiver Experiments; Radiant Heat Test, Sandia National Laboratories/Livermore, SAND84-8251, Hraby, J. M., Steele, B. R., Burolla, V. P. (Dec 1984) 81 pp. NTIS Order No. DE85005302/XAB

10-MW_e Solar Thermal Central Receiver Pilot Plant; Thermal Storage System Test 1040 Part A, Bed Conditioning Procedure; Part B, Controls Test Procedure, Sandia National Laboratories/Livermore, SAND84-8184, Cady, E. C. (Dec 1984) 130 pp. NTIS Order No. DE85005798

Bibliography of Sandia National Laboratories Solar Central Receiver Reports, Sandia National Laboratories/Livermore, SAND84-8188, Skinrood, A. C., Radosevich, L. G., Soderstrum, M. G. (Nov 1984) 185 pp. NTIS Order No. DE85003268/XAB

Exploratory Corrosion Tests on Alloys in Molten Salts at 900°C, SERI/TP-255-2492, Coyle, R. T., Thomas, T. M., Lai, G. Y. (Oct 1984) 15 pp. NTIS Order No. DE85000511

Molten Salt Receiver Subsystem Research Experiments; Phase I, Final Report, Sandia National Laboratories/Livermore, SAND82-8178 (Vol. 1) (Oct 1984) 342 pp. NTIS Order No. DE85002669

Molten Salt Receivers Subsystem Research Experiments; Phase I, Final Report, Sandia National Laboratories/Livermore, SAND82-8178 (Vol. 2) (Oct 1984) 454 pp. NTIS Order No. DE85002668

Molten Salt Solar Receiver Subsystem Research Experiment; Phase 1, Final Report, Sandia National Laboratories/Livermore, SAND82-8180, Carli, G. (Oct 1984) 466 pp. NTIS Order No. DE85000874

10-MW_e Solar Thermal Central Receiver Pilot Plant Mode 1 (Test 1110) Test Report, Sandia National Laboratories/Livermore, SAND84-8181 (Oct 1984) 61 pp. NTIS Order No. DE85003154

Solid Particle Receiver Experiments; Velocity Measurements, Sandia National Laboratories/Livermore, SAND84-8238, Hraby, J. M., Burolla, V. P. (Oct 1984) 44 pp. NTIS Order No. DE85000257/XAB

Experimental Study of Direct In-Site Generation of Steam in a Line Focus Solar Collector, Sandia National Laboratories/Livermore, DOE/SF/11964-T1, Hurtado, P., Kast, M. (Sep 1984) 74 pp. NTIS Order No. DE85007760

Molten Salt Receiver Subsystem Research Experiment; Executive Summary, Final Report, Phase I, Sandia National Laboratories/Livermore, SAND84-8178 (Sep 1984) 36 pp. NTIS Order No. DE85001589/XAB

Molten Salt Solar Receiver Subsystem Research Experiment; Executive Summary, Phase 1, Final Report, Sandia National Laboratories/Livermore, SAND84-8176, Carli, G. (Sep 1984) 62 pp. NTIS Order No. DE85000245

Vanguard I Solar Parabolic Dish-Stirling Engine Module; Final Report; May 28, 1982-September 30, 1984, DOE/AL/16333-2, Washom, B., Hagen, T., Wells, D., Wilcox, W., Hall, L., Percival, W., Holgerssen, S., Sears, D., Keough, K. (Sep 1984) 190 pp. NTIS Order No. DE86008841

Experimental and Theoretical Study of a Solar Thermochemical Receiver Module, Jet Propulsion Laboratory, DOE/JPL/1060-76, Won, Y. S., Voecks, G. E., McCrary, J. H. (Jul 1984) 34 pp. NTIS Order No. DE85000352

Performance of High-Temperature Central Receiver Systems, Sandia National Laboratories/Livermore, SAND84-8233, DeLaquil, P., III, Anderson, J. V. (Jul 1984) 56 pp. NTIS Order No. DE84015695

Technical Review of the Solid Particle Receiver Program, January 25–26, 1984, Sandia National Laboratories/Livermore, SAND84-8229, Falcone, P. K. (Jul 1984) 47 pp. NTIS Order No. DE84015181

10-MW_e Solar Thermal Central Receiver Pilot Plant; Beam Safety Tests and Analyses, Sandia National Laboratories/Livermore, SAND83-8035, Brumleve, T. D. (Jul 1984) 96 pp. NTIS Order No. DE84015466

Nomographic Methodology for Use in Performance Trade-Off Studies of Parabolic Dish Solar Power Modules, Jet Propulsion Laboratory, DOE/JPL-1060-74, Selcuk, M. K., Fujita, T. (Jun 1984) 61 pp. NTIS Order No. DE85000323

Bibliography of Reports of the Sandia Solar Thermal Distributed Receiver Systems Project, Sandia National Laboratories/Albuquerque, SAND84-0313, Leonard, J. A., Klimas, C. R. (Apr 1984) 55 pp. NTIS Order No. DE84013208

Estimating Convective Energy Losses from Solar Central Receivers, Sandia National Laboratories/Livermore, SAND84-8717, Siebers, D. L., Kraabel, J. S. (Apr 1984) 68 pp. NTIS Order No. DE84010919

10-MW_e Solar Thermal Central Receiver Pilot Plant Mirror Module Corrosion Survey, Sandia National Laboratories/Livermore, SAND84-8214, Noring, J. E., Mavis, C. L., Decker, E. V., Skvarna, P. E. (Mar 1984) 52 pp. NTIS Order No. DE84009311

Atmospheric Transmittance Model for a Solar Beam Propagating between a Heliostat and a Receiver, Sandia National Laboratories/Livermore, SAND83-8177, Pitman, C. L., Vant-Hull, L. L. (Feb 1984) 76 pp. NTIS Order No. DE84007980

Alternate Central Receiver Power System; Phase II, Volume I—Executive Summary, Sandia National Laboratories/Livermore, SAND81-8192/1 (Jan 1984) 130 pp. NTIS Order No. DE84009610

Alternate Central Receiver Power System; Phase II, Volume III—Molten Salt Materials Tests, Final Report, Sandia National Laboratories/Livermore, SAND81-8192/3 (Jan 1984) 273 pp. NTIS Order No. DE84009207

10-MW_e Solar Thermal Central Receiver Pilot Plant Mid-Term Test and Evaluation Review, July 20–21, 1983, Sandia National Laboratories/Livermore, SAND83-8038 (Jan 1984) 46 pp. NTIS Order No. DE84005589

Heat Loss Studies, Sandia National Laboratories/Albuquerque, SAND84-0506C, Meyer, R. D. (1984) 29 pp. NTIS Order No. DE84010268

Requirements for High-Temperature Air-Cooled Central Receivers, SERI/TP-252-2030, Wright, J. D. (Dec 1983) 5 pp. NTIS Order No. DE84000081

Sodium Solar Receiver Experiment; Final Report, Sandia National Laboratories/Livermore, SAND82-8192 (Dec 1983) 284 pp. NTIS Order No. DE84005065

Air/Molten Salt Direct-Contact Heat-Transfer Experiment and Economic Analysis, SERI/TR-252-2015, Bohn, M. S. (Nov 1983) 63 pp. NTIS Order No. DE84000080

International Energy Agency Small Solar Power Systems Central Receiver System Sodium Heat Transfer System Modeling, Sandia National Laboratories/Livermore, SAND83-1631C, Baker, A. F., Fewell, M. E. (Nov 1983) 6 pp. NTIS Order No. DE84002051

10-MW_e Solar Thermal Central Receiver Pilot Plant; 1982 Operational Test Result, Sandia National Laboratories/Livermore, SAND83-8027, Bartel, J. J. (Nov 1983) 55 pp. NTIS Order No. DE84002676

High-Temperature Direct Absorption Research, SERI/TP-252-2105, Copeland, R. J. (Oct 1983) 7 pp. NTIS Order No. DE84000019

Second-Law Efficiency of Solar-Thermal Cavity Receivers, Jet Propulsion Laboratory, DOE/JPL-1060-65, Moynihan, P. I. (Oct 1983) 59 pp. NTIS Order No. DE84008508

High-Temperature Molten Salts for Use in Solar Thermal Energy Systems, SERI/TP-255-2001, Coyle, R. T., Copeland, R. J., Burrows, R. W., Goggin, R. M. (Sep 1983) 27 pp. NTIS Order No. DE83011997

Experiment and Economic Analysis of an Air/Molten Salt Direct-Contact Heat Exchanger, SERI/TP-252-2053, Bohn, M. S. (Aug 1983) 8 pp. NTIS Order No. DE83012130

Solar Tests of Aperture Plate Materials for Solar Thermal Dish Collectors, Jet Propulsion Laboratory, DOE/JPL-1060-62, Jaffe, L. D. (Aug 1983) 79 pp. NTIS Order No. DE84009157

Experimental Mixed-Convection Heat Transfer from a Large, Vertical Surface in a Horizontal Flow, Sandia National Laboratories/Livermore, SAND83-8225, Siebers, D. L., Schwind, R. G., Moffat, R. J. (Jul 1983) 218 pp. NTIS Order No. DE83016419

10-MW_e Solar Thermal Central Receiver Pilot Plant; Thermal Storage Subsystem Evaluation—Subsystem Activation and Controls Testing Phase, Sandia National Laboratories/Livermore, SAND83-8015, Faas, S. E. (Jul 1983) 60 pp. NTIS Order No. DE83016447

Status of Research on Convective Losses from Solar Central Receivers, Sandia National Laboratories/Livermore, SAND83-8224, Abrams, M. (Jun 1983) 28 pp. NTIS Order No. DE83013282

Characteristics of Current Solar-Central-Receiver Projects October 1982, Sandia National Laboratories/Livermore, SAND83-8013, Baker, A. F., Skinrood, A. C. (May 1983) 47 pp. NTIS Order No. DE83012856

Slow-Strain-Rate Testing of 2.25Cr-1Mo in Molten-Nitrate Salt, Sandia National Laboratories/Livermore, SAND83-8214, Goods, S. H. (May 1983) 44 pp. NTIS Order No. DE83011894

X-Ray-Diffraction Analysis of Corrosion Products of Fe-Ni-Cr Alloys Formed in Molten-Nitrate Salts, Sandia National Laboratories/Livermore, SAND83-8223, Boehme, D. R., Bradshaw, R. W. (May 1983) 21 pp. NTIS Order No. DE83013317

Thermal Mechanical Fatigue; Test Apparatus for Solar-Receiver Tubing, Sandia National Laboratories/Livermore, SAND83-8213, Hughes, D. A., Spingarn, J. R. (Apr 1983) 26 pp. NTIS Order No. DE83011930

10-MW_e Central-Receiver Solar-Thermal Pilot-Plant Test Operations Plan, Sandia National Laboratories/Livermore, SAND82-8025, Anderson, J. S., Smith, J. W. (Mar 1983) 192 pp. NTIS Order No. DE83009737

10-MW_e Solar-Thermal Central-Receiver Pilot-Plant Receiver Steam Generation (Test 1030) Evaluation Report, Sandia National Laboratories/Livermore, SAND83-8005, Baker, A. F., Atwood, D. L. (Mar 1983) 54 pp. NTIS Order No. DE83010836

Development of a Predictive Computer Code for Heat Losses from Solar External Receivers, Sandia National Laboratories/Livermore, SAND82-8183, Afshari, B., Ferziger, J. H. (Feb 1983) 48 pp. NTIS Order No. DE83007310

Power from the Sun:

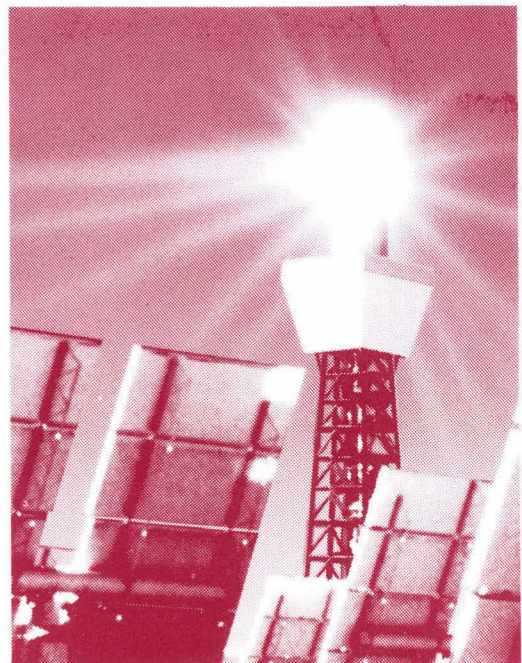
Principles of High Temperature Solar Thermal Technology

Thirty-four percent of our current energy resources is used to make electricity, and 26% of that is used to generate process heat. Solar thermal technology could displace a large portion of these mostly nonrenewable energy resources.

Power from the Sun gives a basic overview of the research completed and hardware developed by the U.S. Department of Energy's Solar Thermal Technology Program.

Illustrated throughout, this document is a valuable resource for scientists and researchers interested in the program and how the technology is developing. High School and college students interested in the nation's energy resources would benefit as well.

Available from the Superintendent of Documents. 64 pp. Stock no. 061-000-00698-2. \$3.25.



Solar Central Receiver High Temperature Process Air Systems, Sandia National Laboratories/Livermore, SAND82-8254, DeLaquil, P., III, Yang, C. L., Noring, J. E. (Feb 1983) 65 pp. NTIS Order No. DE86007780

Direct Steam Generation in Line-Focus Solar Collectors, SERI/TP-253-1870, May, E. K., Murphy, L. M. (Jan 1983) 8 pp. NTIS Order No. DE83006030

DRAC-A User Friendly Computer Code for Modeling Transient Thermohydraulic Phenomena in Solar Receiver Tubing, Sandia National Laboratories/Livermore, SAND82-8744, Winters, W. S. (Jan 1983) 45 pp. NTIS Order No. DE83007091

Thermal Convection Loop Study of Corrosion of Alloy 800 in Molten $\text{NaNO}_3\text{-KNO}_3$, Sandia National Laboratories/Livermore, SAND82-8911, Bradshaw, R. W. (Jan 1983) 39 pp. NTIS Order No. DE83006766

10-MW_e Solar-Thermal Central-Receiver Pilot Plant; Receiver Cold-Flow (Test 1010) and Receiver Steam-Generation (Test 1030) Test Report, Sandia National Laboratories/Livermore, MDC-H-0141 (Jan 1983) 489 pp. NTIS Order No. DE83009236

Central Receiver Test Facility as a Simulator for the Hydrogen-Burn Thermal Environment, Sandia National Laboratories/Albuquerque, SAND83-0883C, Dandini, V. J. (1983) 16 pp. NTIS Order No. DE83015667

International Energy Agency Small Solar Power Systems Sodium Heat Transfer System Modeling, Sandia National Laboratories/Livermore, SAND83-1613C, Baker, A. F., Fewell, M. E. (1983) 6 pp. NTIS Order No. DE84002501

Evaluation of Air-Cooled Central Receivers, SERI/TP-252-1775, Wright, J. D. (Dec 1982) 6 pp. NTIS Order No. DE83005130

10-MW_e Central-Receiver Solar-Thermal Pilot Plant Data-Evaluation Plan, Sandia National Laboratories/Livermore, SAND82-8027, Radosevich, L. G. (Dec 1982) 56 pp. NTIS Order No. DE83005035

Corrosion of Alloys in Molten Nitrates, Sandia National Laboratories/Livermore, SAND80-8181 (Sep 1982) 89 pp. NTIS Order No. DE83001156

Master Control System As-Built Drawings (RADL Item 6-5); Volume 1: Software Listings; Section 2: Data Acquisition System, Part 1, DOE/SF/10499-T160 (Sep 1982) 439 pp. NTIS Order No. DE86001316

Plant Maintenance/Training Manual (RADL Item 2-37); Section 2: Stationary Apparatus. Revision, DOE/SF/10499-T144 (Sep 1982) 745 pp. NTIS Order No. DE86000660

Protective Coatings for Alloys in Contact with Molten Drawsalt ($\text{NaNO}_3\text{-KNO}_3$), Sandia National Laboratories/Livermore, SAND82-8028, Carling, R. W., Bradshaw, R. W., Mar, R. W. (Sep 1982) 26 pp. NTIS Order No. DE83002505

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration: Plant Maintenance/Training Manual (RADL Item 2-37). Section 10. Facilities, DOE/SF/10499-T157 (Sep 1982) 333 pp. NTIS Order No. TI86000670

10-MW_e Solar Thermal Central Receiver Pilot Plant; Plant Maintenance/Training Manual (RADL Item 2-37). Section 9. Heating, Ventilating, and Air Conditioning, DOE/SF/10499-T156 (Sep 1982) 186 pp. NTIS Order No. TI86000671

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration: Master Control System As-Built Drawings (RADL Item 6-5); Volume 5: Interlock Logic System (ILS), DOE/SF/10499-T167 (Sep 1982) 403 pp. NTIS Order No. DE86001397

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration: Master Control System As-Built Drawings (RADL Item 6-5); Volume 4: SDPC; Section 2: CCM Data Bases, DOE/SF/10499-T165 (Sep 1982) 438 pp. NTIS Order No. DE86001395

10-MW_e Solar Thermal Central Receiver Pilot Plant Solar Facilities; Master Control System As-Built Drawings (RADL Item 6-5); Volume 1: Software Listings; Section 2: Data Acquisition System, Part 2, DOE/SF/10499-T161 (Sep 1982) 544 pp. NTIS Order No. DE86001391

Interlock Logic System (ILS) Diagrams (RADL Item 2-38, Supplement) (Engineering Material), DOE/SF/10499-T128 (Jul 1982) NTIS Order No. TI86000700

Investigation of Free-Forced Convection Flows in Cavity-Type Receivers, Sandia National Laboratories/Livermore, SAND82-8190, Humphrey, J. A. C., Sherman, F. S., Chen, K-S., To, W-M. (Jul 1982) 15 pp. NTIS Order No. DE82020118

Line-Focus Receiver Heat Losses, SERI/TR-632-868, Dougherty, D. A. (Jul 1982) 36 pp. NTIS Order No. DE82019165

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration, CS-MCS and CS-Plant Interface Requirements (RADL Item 2-30-1), DOE/SF/10499-T123 (Jun 1982) 365 pp. NTIS Order No. DE86000703

Direct-Contact Air/Molten Salt Heat Exchange for Solar Thermal Systems, SERI/TP-252-1523, Wright, J. D., D'Agincourt, C. G. (May 1982) 6 pp. NTIS Order No. DE82015268

Fatigue and Creep-Fatigue Testing of Steam-Filled Tubular Alloy 800 Specimens, Sandia National Laboratories/Albuquerque, SAND82-0850, Jones, W. B., Van Den Avyle, J. A. (May 1982) 49 pp. NTIS Order No. DE82019220

Low-Cycle Fatigue and Creep-Fatigue Testing of Salt-Filled Alloy 800 Specimens; Final Report, Sandia National Laboratories/Albuquerque, SAND82-8182, Kaae, J. L. (May 1982) 27 pp. NTIS Order No. DE82015730

Progress Report: Molten Nitrate Salt Technology Development, Sandia National Laboratories/Livermore, SAND82-8220, Mar, R. W., Bradshaw, R. W., Carling, R. W., Goods, S. H., Nagelberg, A. S., Nissen, D. A. (Apr 1982) 54 pp. NTIS Order No. DE82015867

Receiver Subsystem Analysis Report, Revision (RADL Item 4-1); 10-MW_e Solar Thermal Central Receiver Pilot Plant Solar Facilities Design Integration, Sandia National Laboratories/Livermore, DOE/SF/10499-T16, Coleman, G. C. (Apr 1982) 633 pp. NTIS Order No. DE83001638

Steam Generation in Line-Focus Solar Collectors; A Comparative Assessment of Thermal Performance, Operating Stability, and Cost Issues, SERI/TR-632-1311, Murphy, L. M., May, E. K. (Apr 1982) 171 pp. NTIS Order No. DE82014531

High Temperature Ceramic Heat Exchanger Element for a Solar Thermal Receiver; Final Report, Jet Propulsion Laboratory, NASA-CR-169625, Strumpf, H. J., Kotchick, D. M., Coombs, M. G. (Mar 1982) 114 pp. NTIS Order No. N83-14666/2

Thermal Fatigue Test of "Solar One" Receiver-Tube Weldments, Sandia National Laboratories/Livermore, SAND82-8206, Hughes, D. A. (Mar 1982) 33 pp. NTIS Order No. DE82012520

Department of Energy Solar-Central-Receiver Annual Meeting; Claremont, California, 13-15 October 1981, Sandia National Laboratories/Livermore, SAND82-8002 (Feb 1982) 297 pp. NTIS Order No. DE82011932

Thermal-Convection-Loop Corrosion Tests of 316SS and IN800 in Molten Nitrate Salts, Sandia National Laboratories/Livermore, SAND82-8210, Bradshaw, R. W. (Feb 1982) 31 pp. NTIS Order No. DE82012313

Thermal Receiver Designs for Line-Focus Solar Collectors, Sandia National Laboratories/Albuquerque, SAND81-1862, Chiang, C. J. (Feb 1982) 24 pp. NTIS Order No. DE82012067

ASCUAS: A Solar Central Receiver Utilizing a Solid Thermal Carrier, Sandia National Laboratories/Livermore, SAND82-8203, Martin, J. G., Vitko, J., Jr. (Jan 1982) 33 pp. NTIS Order No. DE82010942

High Temperature Materials Experience at the Central Receiver Test Facility, Sandia National Laboratories/Albuquerque, SAND82-0263C, Holmes, J. T. (Jan 1982) 14 pp. NTIS Order No. DE82010356

Systems

Solar Thermal Technology Program Bibliography, 1973-1985, SERI/SP-272-3008 (Dec 1986) 192 pp. NTIS Order No. DE86010728

Heat Engine Development for Solar Thermal Dish-Electric Power Plants, Sandia National Laboratories/Albuquerque, SAND86-0289, Linker, K. L. (Nov 1986) 33 pp. NTIS Order No. DE87003583

Acurex Solar Corporation Modular Industrial Solar Retrofit Qualification Test Results, Sandia National Laboratories/Albuquerque, SAND85-2316, Cameron, C. P., Dudley, V. E. (Oct 1986) 155 pp. NTIS Order No. DE87002088

BDM Corporation Modular Industrial Solar Retrofit Qualification Test Results, Sandia National Laboratories/Albuquerque, SAND85-2317, Cameron, C. P., Dudley, V. E. (Oct 1986) 185 pp. NTIS Order No. DE87002243

Custom Engineering; Incorporated Modular Industrial Solar Retrofit Qualification Test Results, Sandia National Laboratories/Albuquerque, SAND85-2318, Cameron, C. P., Dudley, V. E. (Oct 1986) 166 pp. NTIS Order No. DE87002233

Foster Wheeler Solar Development Corporation Modular Industrial Solar Retrofit Qualification Test Results, Sandia National Laboratories/Albuquerque, SAND85-2319, Cameron, C. P., Dudley, V. E., Lewandowski, A. A. (Oct 1986) 142 pp. NTIS Order No. DE87002089

Solar Kinetics, Incorporated Modular Industrial Solar Retrofit Qualification Test Results, Sandia National Laboratories/Albuquerque, SAND85-2320, Cameron, C. P., Dudley, V. E. (Oct 1986) 155 pp. NTIS Order No. DE87002090

Economic Analysis of Alternate Uses and Design; Crosbyton Solar Power Project, DOE/AL/21557-T10, Jonish, J. E., O'Hair, E. A. (Sep 1986) 89 pp. NTIS Order No. DE86016032

Fluid Control and Instrumentation System for a Multi-Bowl/Multi-Load Solar System; the Crosbyton Solar Power Project, DOE/AL/21557-T7, Gustafson, D. L., Craig, J. P. (Sep 1986) 75 pp. NTIS Order No. DE86015725

10-MW_e Solar Thermal Central Receiver Pilot Plant Control System Evaluation, Sandia National Laboratories/Livermore, SAND86-8239, Tanner, D. N. (Sep 1986) 77 pp. NTIS Order No. DE87002370

10-MW_e Solar Thermal Central Receiver Pilot Plant; Thermal Storage Subsystem Evaluation; Final Report, Sandia National Laboratories/Livermore, SAND86-8212, Faas, S. E., Thorne, L. R., Fuchs, E. A., Gilbertsen, N. D. (Jun 1986) 113 pp. NTIS Order No. DE86011730

Application of RELAP4/MOD6 to Analysis of Solar-Thermal Power Plants; Control System Modeling, Sandia National Laboratories/Albuquerque, SAND86-0852, Byers, R. K. (Apr 1986) 39 pp. NTIS Order No. DE86011848

Molten Salt Electric Experiment Steam Generator Subsystem; Final Report, Sandia National Laboratories/Livermore, SAND85-8181 (Apr 1986) 334 pp. NTIS Order No. DE86011380

Assessment of Heliostat Control System Methods, SERI/SP-253-2390, Pearson, J., Chen, B. (Jan 1986) 40 pp. NTIS Order No. DE86004416

Design and Performance Predictions of the DOE Small Community Solar Experiment at Osage City, Kansas, Sandia National Laboratories/Albuquerque, SAND86-0295C, Rush, E. E. (1986) 5 pp. NTIS Order No. DE86009624

Heat Engine Development for Solar Thermal Dish-Electric Power Plants, Sandia National Laboratories/Albuquerque, SAND86-0289C, Linker, K. L. (1986) 16 pp. NTIS Order No. DE86009377

Engineering Systems Analysis of a Hybrid Quantum/Thermal Process for Fuels and Chemicals Production, SERI/TR-232-2565, Schell, D. J., Karpuk, M. E., West, R. E. (Nov 1985) 68 pp. NTIS Order No. DE85016891

Experimental Test and Evaluation Phase of the 10-MW_e Solar Thermal Central Receiver Pilot Plant, Sandia National Laboratories/Livermore, SAND85-8015, Radosevich, L. G. (Sep 1985) 295 pp. NTIS Order No. DE86005647

Dish Electric Systems Heat Engine Assessment, Sandia National Laboratories/Albuquerque, SAND85-0522, Lukens, L. L. (Jun 1985) 44 pp. NTIS Order No. DE85013942/XAB

10-MW_e Solar Thermal Central Receiver Pilot Plant Design Day Performance Monograph, Sandia National Laboratories/Livermore, SAND85-8207, Yang, C. L. (Jun 1985) 31 pp. NTIS Order No. DE85015663

Monograph Series No. 2; 10-MW_e Solar Thermal Central Receiver Pilot Plant and Receiver Performance Evaluation, Sandia National Laboratories/Livermore, SAND85-8224, Baker, A. F., Atwood, D. L. (May 1985) 54 pp. NTIS Order No. DE85012536

Theory of Cellwise Optimization for Solar Central Receiver Systems, Sandia National Laboratories/Livermore, SAND85-8177, Lipps, F. W. (May 1985) 80 pp. NTIS Order No. DE85012586

10-MW_e Solar Thermal Central Receiver Pilot Plant Maintenance Experience; January 1982–March 1983, Sandia National Laboratories/Livermore, SAND85-8211, Smith, J. W. (May 1985) 39 pp. NTIS Order No. DE85012587

10-MW_e Solar Thermal Central Receiver Pilot Plant; 1984 Summer Solstice Power Production Test, Sandia National Laboratories/Livermore, SAND85-8216, Carrell, E. H. (May 1985) 61 pp. NTIS Order No. DE85012588

Proceedings of the Distributed Receiver Solar Thermal Technology Conference; Albuquerque, New Mexico; April 24–25, 1985, Sandia National Laboratories/Albuquerque, SAND84-2454, Muir, J. F. (Apr 1985) 269 pp. NTIS Order No. DE85010551

Program for the Calculation of Paraboloidal-Dish Solar Thermal Power Plant Performance, Jet Propulsion Laboratory, DOE/JPL-1060-85, Bowyer, J. M. (Apr 1985) 51 pp. NTIS Order No. DE85014495

Solar Walk-Off Protection, Sandia National Laboratories/Albuquerque, SAND84-7019, Awaya, H., Bedard, R. (Apr 1985) 68 pp. NTIS Order No. DE85012112

Control System for Parabolic Dish Concentrator No. 1, Jet Propulsion Laboratory, DOE/JPL-1060-86, Stallkamp, J. A. (Mar 1985) 28 pp. NTIS Order No. DE85014501

Activity and Accomplishments in Dish/Stirling Electric Power System Development, Jet Propulsion Laboratory, DOE/JPL-1060-82, Livingston, F. R. (Feb 1985) 145 pp. NTIS Order No. DE85014494

Parabolic Dish Test Site History and Operating Experience, Jet Propulsion Laboratory, DOE/JPL-1060-84, Selcuk, M. K. (Feb 1985) 221 pp. NTIS Order No. DE85014502

Proceedings of the Department of Energy Solar Central Receiver Annual Meeting; San Diego, California; April 24–26, 1984, Sandia National Laboratories/Livermore, SAND85-8202 (Feb 1985) 255 pp. NTIS Order No. DE85009114

10-MW_e Solar Thermal Central Receiver Pilot Plant Total Capital Cost, Sandia National Laboratories/Livermore, SAND83-8019, Norris, H. F., Jr. (Feb 1985) 188 pp. NTIS Order No. DE85009113

Biomass Processing and Solar Process Heat, Sandia National Laboratories/Livermore, SAND84-8256, Sizmann, R. (Jan 1985) 26 pp. NTIS Order No. DE85010097

Development of an Organic Rankine-Cycle Power Module for a Small Community Solar Thermal Power Experiment, Jet Propulsion Laboratory, DOE/JPL-1060-80, Kiceniuk, T. (Jan 1985) 133 pp. NTIS Order No. DE85014499

Small Central Receiver Brayton Cycle Study; Final Technical Report, December 1, 1982–June 30, 1983, Sandia National Laboratories/Livermore, SAND84-8189 (Jan 1985) 320 pp. NTIS Order No. DE85008882

Collector Power Systems Preoperational Test; Procedure 820, Sandia National Laboratories/Livermore, DOE/SF/10499-T118 (1985) 33 pp. NTIS Order No. DE86000707

10-MW_e Solar Pilot Plant; Daggett, California; Receiver Steam Generation (Controls) Preoperational Test, Procedure 1030; Revision 0, Section 10, Attachments, Sandia National Laboratories/Livermore, DOE/SF/10499-T140, Raetz, J. E., Riel, E. J. (1985) 185 pp. NTIS Order No. DE86000706

Bibliography of Sandia National Laboratories Solar Central Receiver Reports, Sandia National Laboratories/Livermore, SAND84-8188, Skinrood, A. C., Radosevich, L. G., Soderstrum, M. G. (Dec 1984) 185 pp. NTIS Order No. DE85003268/XAB

Development and Testing of Parabolic Dish Concentrator No. 1, Jet Propulsion Laboratory, DOE/JPL-1060-81, Dennison, E. W., Thostesen, T. O. (Dec 1984) 38 pp. NTIS Order No. DE85014500

10-MW_e Solar Thermal Central Receiver Pilot Plant Mode 1; Turbine Direct, Acceptance, Test, Procedure 1110, Sandia National Laboratories/Livermore, SAND84-8185, Raetz, J. E. (Dec 1984) 122 pp. NTIS Order No. DE85005797

10-MW_e Solar Thermal Central Receiver Pilot Plant Mode 5 Charging Only Acceptance Test Procedure 1150, Sandia National Laboratories/Livermore, SAND84-8183 (Dec 1984) 113 pp. NTIS Order No. DE85005303/XAB

10-MW_e Solar Thermal Central Receiver Pilot Plant; Thermal Storage System Test 1040 Part A, Bed Conditioning Procedure; Part B, Controls Test Procedure, Sandia National Laboratories/Livermore, SAND84-8184, Cady, E. C. (Dec 1984) 130 pp. NTIS Order No. DE85005798

Solar Industrial Process Heat (IPH) Project Technical Report, October 1982–September 1983, Sandia National Laboratories/Albuquerque, SAND84-1812, Harley, E. L., Stine, W. B. (Nov 1984) 159 pp. NTIS Order No. DE85004297

Molten Salt Receiver Subsystem Research Experiments; Phase I, Final Report, Sandia National Laboratories/Livermore, SAND82-8178 (Vol. 1) (Oct 1984) 342 pp. NTIS Order No. DE85002669

Molten Salt Receivers Subsystem Research Experiments; Phase I, Final Report, Sandia National Laboratories/Livermore, SAND82-8178 (Vol. 2) (Oct 1984) 454 pp. NTIS Order No. DE85002668

Molten Salt Solar Receiver Subsystem Research Experiment; Phase 1, Final Report, Sandia National Laboratories/Livermore, SAND82-8180, Carli, G. (Oct 1984) 466 pp. NTIS Order No. DE85000874

Molten Salt Steam Generator Subsystem Research Experiment; Phase I, Final Report, Sandia National Laboratories/Livermore, SAND82-8177 (Vol. 2, App.) (Oct 1984) 311 pp. NTIS Order No. DE85003021

Solar Total Energy Project; Shenandoah, Georgia Site; Annual Technical Progress Report, July 1, 1983–June 30, 1984, Sandia National Laboratories/Albuquerque, AL0-3994-84/1, Ney, E. J. (Oct 1984) 51 pp. NTIS Order No. DE85001486

10-MW_e Solar Thermal Central Receiver Pilot Plant Mode 1 (Test 1110) Test Report, Sandia National Laboratories/Livermore, SAND84-8181 (Oct 1984) 61 pp. NTIS Order No. DE85003154

Molten Salt Receiver Subsystem Research Experiment, Executive Summary; Final Report, Phase 1, Sandia National Laboratories/Livermore, SAND84-8178 (Sep 1984) 36 pp. NTIS Order No. DE85001589/XAB

Molten Salt Solar Receiver Subsystem Research Experiment; Executive Summary; Phase 1, Final Report, Sandia National Laboratories/Livermore, SAND84-8176, Carli, G. (Sep 1984) 62 pp. NTIS Order No. DE85000245

Molten Salt Steam Generator Subsystem Research Experiment; Executive Summary; Phase 1, Final Report, Sandia National Laboratories/Livermore, SAND84-8175 (Sep 1984) 27 pp. NTIS Order No. DE85000246

Molten Salt Steam Generator Subsystem Research Experiment; Executive Summary; Phase 1, Specifications and Design, Final Report, Sandia National Laboratories/Livermore, SAND84-8177 (Sep 1984) 26 pp. NTIS Order No. DE85002090

Vanguard I Solar Parabolic Dish-Stirling Engine Module; Final Report; May 28, 1982–September 30, 1984, DOE/AL/16333-2, Washom, B., Hagen, T., Wells, D., Wilcox, W., Hall, L., Percival, W., Holgerssen, S., Sears, D., Keough, K. (Sep 1984) 190 pp. NTIS Order No. DE86008841

Industrial Process Heat Data Analysis and Evaluation, SERI/TR-253-2161-Volume I, Lewandowski, A. A., Gee, R. C., May, E. K. (Jul 1984) 121 pp. NTIS Order No. DE84013013

Industrial Process Heat Data Analysis and Evaluation, SERI/TR-253-2161-Volume II, Lewandowski, A. A., Gee, R. C., May, E. K. (Jul 1984) 396 pp. NTIS Order No. DE84013014

Performance of High-Temperature Central Receiver Systems, Sandia National Laboratories/Livermore, SAND84-8233, DeLaquil, P., III, Anderson, J. V. (Jul 1984) 56 pp. NTIS Order No. DE84015695

Assessment of Solar Thermal Concentrator Research and Development, Sandia National Laboratories/Livermore, SAND84-8228, Radosevich, L. G., Caputo, R. S. (Jun 1984) 49 pp. NTIS Order No. DE84014461.

Testing of Modular Industrial Solar Retrofit Industrial Process Steam Systems, Sandia National Laboratories/Albuquerque, SAND84-1042C, Cameron, C. P., Dudley, V. E. (Jun 1984) 11 pp. NTIS Order No. DE84012552

Solar Thermal Parabolic Dish Systems: Technology and Applications, Sandia National Laboratories/Albuquerque, SAND84-0632C, Leonard, J. A. (May 1984) 10 pp. NTIS Order No. DE84012239

Bibliography of Reports of the Sandia Solar Thermal Distributed Receiver Systems Project, Sandia National Laboratories/Albuquerque, SAND84-0313, Leonard, J. A., Klimas, C. R. (Apr 1984) 55 pp. NTIS Order No. DE84013208

Kinematic Stirling Engine as an Energy Conversion Subsystem for Paraboloidal Dish Solar Thermal Power Plants, Jet Propulsion Laboratory, DOE/JPL-1060-73, Bowyer, J. M. (Apr 1984) 73 pp. NTIS Order No. DE84014616

Modeling of the DOE-Sponsored IPH Field-Test Experiments, SERI/TP-253-2324, Lewandowski, A. A. (Apr 1984) 6 pp. NTIS Order No. DE84004501

- Plant Operation Report and Daily Operation Summary, Monthly Data**, Sandia National Laboratories/Livermore, DOE/DR/00789-T2 (Apr 1984) 75 pp. NTIS Order No. DE84012479
- Solar Parabolic Dish Technology Annual Evaluation Report, Fiscal Year 1983**, Jet Propulsion Laboratory, JPL-PUB-84-25 (15 Apr 1984) 37 pp. NTIS Order No. N84-282177
- Thermal Modeling of Line Focus Photovoltaic Systems**, Sandia National Laboratories/Albuquerque, SAND84-0703, Beraun, R. (Apr 1984) 66 pp. NTIS Order No. DE84013920
- Fifth Parabolic Dish Solar Thermal Power Program Annual Review; Proceedings; Indian Wells, California, 6 December 1983**, Jet Propulsion Laboratory, DOE/JPL-1060-69 (Mar 1984) 267 pp. NTIS Order No. DE84008503
- Thermochemical Energy Transport Systems Study**, Sandia National Laboratories/Albuquerque, SAND83-7464 (Mar 1984) 75 pp. NTIS Order No. DE84011604
- 1984 Program of Work: Test and Evaluation of CRS and DCS Plants**, Sandia National Laboratories/Livermore, DOE/DR/00789-T1, Martin, J. G., Wattiez, P., Munox, F. R. (Mar 1984) 55 pp. NTIS Order No. DE84012477
- CONC/11: A Computer Program for Calculating the Performance of Dish-Type Solar Thermal Collectors and Power Systems**, Jet Propulsion Laboratory, DOE/JPL-1060-68, Jaffe, L. D. (Feb 1984) 146 pp. NTIS Order No. DE84008502
- Alternate Central Receiver Power System; Phase II, Volume I—Executive Summary**, Sandia National Laboratories/Livermore, SAND81-8192/1 (Jan 1984) 130 pp. NTIS Order No. DE84009610
- Alternate Central Receiver Power System; Phase II, Volume III—Molten Salt Materials Tests, Final Report**, Sandia National Laboratories/Livermore, SAND81-8192/3 (Jan 1984) 273 pp. NTIS Order No. DE84009207
- Plant Operation Report and Daily Evaluation Summary**, Sandia National Laboratories/Livermore, DOE/DP/00789-T94 (Jan 1984) 126 pp. NTIS Order No. DE84007886
- Publications of the JPL Solar Thermal Power Systems Project, 1976 to 1983**, Jet Propulsion Laboratory, DOE/JPL-1060-67, Gray, V., Marsh, C., Panda, P. (Jan 1984) 62 pp. NTIS Order No. DE84008501
- 10-MW_e Solar Thermal Central Receiver Pilot Plant Mid-Term Test and Evaluation Review, July 20–21, 1983**, Sandia National Laboratories/Livermore, SAND83-8038 (Jan 1984) 46 pp. NTIS Order No. DE84005589
- CRTF Test Configuration of 10-MW_e Pilot Plant Collector Contract System**, Sandia National Laboratories/Livermore, DOE/ET/21006-1 (1984) 132 pp. NTIS Order No. DE84014472
- Plant Operation Report and Daily Operation Summary, Monthly Data**, Sandia National Laboratories/Livermore, DOE/DR/00789-T3 (1984) 79 pp. NTIS Order No. DE84012478
- Proceedings of the Solar Thermal/Photochemical Conversion Workshop; Golden, Colorado; 10–11 January 1983**, SERI/CP-252-2026, Johnson, D. H., Karpuk, M. E. (Dec 1983) 68 pp. NTIS Order No. DE84000089
- Quantum and Thermal Conversion of Solar Energy to Useful Work**, SERI/TP-252-2137, Johnson, D. H. (Dec 1983) 26 pp. NTIS Order No. DE84000085
- Low-Temperature IPH Parabolic Troughs: Design Variations and Cost-Reduction Potential**, SERI/TR-253-1662, Gee, R. C. (Nov 1983) 42 pp. NTIS Order No. DE84000024
- 10-MW_e Solar Thermal Central Receiver Pilot Plant; 1982 Operational Test Result**, Sandia National Laboratories/Livermore, SAND83-8027, Bartel, J. J. (Nov 1983) 55 pp. NTIS Order No. DE84002676
- Coolidge Solar Irrigation Project; 1982 Annual Report**, Sandia National Laboratories/Albuquerque, SAND83-7124, Larson, D. L. (Oct 1983) 126 pp. NTIS Order No. DE84001081
- Coolidge Solar Irrigation Project; Final Report**, Sandia National Laboratories/Albuquerque, SAND83-7125, Larson, D. L. (Oct 1983) 82 pp. NTIS Order No. DE84001686
- Solar Industrial Process Heat (IPH) Project Technical Report, October 1981–September 1982**, Sandia National Laboratories/Albuquerque, SAND83-2074, Harley, E. L., Stine, W. B. (Oct 1983) 142 pp. NTIS Order No. DE84002758
- Determination of Freeze-Protection Heat Loss from a Parabolic Trough Solar System**, SERI/TR-253-1906, May, E. K. (Aug 1983) 34 pp. NTIS Order No. DE84000005

10-MW_e Solar Thermal Central Receiver Pilot Plant; Thermal Storage Subsystem Evaluation—Subsystem Activation and Controls Testing Phase, Sandia National Laboratories/Livermore, SAND83-8015, Faas, S. E. (Jul 1983) 60 pp. NTIS Order No. DE83016447

Accuracy of the Barstow Solar-Thermal Pilot Plant Cost Estimates, Sandia National Laboratories/Livermore, SAND83-8217, Radosevich, L. G. (Jun 1983) 19 pp. NTIS Order No. DE83013623

Overview of the Construction and Start-Up of the 10-MW_e Solar-Thermal Central-Receiver Pilot Plant, Sandia National Laboratories/Livermore, SAND83-8021, Bartel, J. J., Skvarna, P. E. (Jun 1983) 36 pp. NTIS Order No. DE83013903

Coolidge Solar Irrigation Project, FY 1982 Monthly Technical Reports, Sandia National Laboratories/Albuquerque, SAND82-7155, Larson, D. L. (Mar 1983) 104 pp. NTIS Order No. DE83010412

Economics of Scale in the Production of Steam with Solar Thermal-Fossil Boiler Hybrid Systems, Sandia National Laboratories/Livermore, SAND83-8202, Hansen, F. R., Lindner, D. L., Vitko, J., Jr. (Mar 1983) 99 pp. NTIS Order No. DE83009359

Proceedings of the Distributed Solar Collector Summary Conference; Technology and Applications; Albuquerque, New Mexico; March 15, 16, 17, 1983, Sandia National Laboratories/Albuquerque, SAND83-0137C, Alvis, R. L. (Mar 1983) 358 pp. NTIS Order No. DE83010276

10-MW_e Central-Receiver Solar-Thermal Pilot-Plant Test Operations Plan, Sandia National Laboratories/Livermore, SAND82-8025, Anderson, J. S., Smith, J. W. (Mar 1983) 192 pp. NTIS Order No. DE83009737

10-MW_e Solar-Thermal Central-Receiver Pilot-Plant Receiver Steam Generation (Test 1030) Evaluation Report, Sandia National Laboratories/Livermore, SAND83-8005, Baker, A. F., Atwood, D. L. (Mar 1983) 54 pp. NTIS Order No. DE83010836

Solar Central Receiver High Temperature Process Air Systems, Sandia National Laboratories/Livermore, SAND82-8254, DeLaquil, P., III, Yang, C. L., Noring, J. E. (Feb 1983) 65 pp. NTIS Order No. DE86007780

Oil/Salt Hydrate Direct-Contact Heat Exchange Experiments, SERI/TR-252-1614, Wright, J. D., Bohn, M. S., Barlow, R. S. (Jan 1983) 30 pp. NTIS Order No. DE83009396

Simple Energy Calculation Method for Solar Industrial Process Heat Steam Systems, SERI/TP-253-1871, Gee, R. C. (Jan 1983) 10 pp. NTIS Order No. DE83007214

Standard Description and Costing Methodology for the Balance-of-Plant Items of a Solar-Thermal Electric-Power Plant, Jet Propulsion Laboratory, DOE/JPL-1060-59 (Jan 1983) 56 pp. NTIS Order No. DE83011240

10-MW_e Solar Central Receiver Pilot Plant Pre-operational Readiness Review Meeting, March 9–10, 1982, Barstow, California, Sandia National Laboratories/Livermore, SAND82-8049, Smith, P. N. (Jan 1983) 27 pp. NTIS Order No. DE83005704

Central Receiver Test Facility as a Simulator for the Hydrogen-Burn Thermal Environment, Sandia National Laboratories/Albuquerque, SAND83-0883C, Dandini, V. J. (1983) 16 pp. NTIS Order No. DE83015667

International Energy Agency Small Solar Power Systems Sodium Heat Transfer System Modeling, Sandia National Laboratories/Livermore, SAND83-1613C, Baker, A. F., Fewell, M. E. (1983) 6 pp. NTIS Order No. DE84002501

Detailed Design Procedure for Solar Industrial Process Heat Systems; Overview, SERI/TP-253-1830, Kutscher, C. F. (Dec 1982) 9 pp. NTIS Order No. DE83005298

Development of SOLIPH; A Detailed Computer Model of Solar Industrial Process Heat Systems, SERI/TP-253-1831, Kutscher, C. F. (Dec 1982) 9 pp. NTIS Order No. DE83005301

Shenandoah Solar Total-Energy Project, Sandia National Laboratories/Albuquerque, SAND80-2560, Leonard, J. A., Hunke, R. W. (Dec 1982) 10 pp. NTIS Order No. DE83005244

10-MW_e Central-Receiver Solar-Thermal Pilot Plant Data-Evaluation Plan, Sandia National Laboratories/Livermore, SAND82-8027, Radosevich, L. G. (Dec 1982) 56 pp. NTIS Order No. DE83005035

Energy Transmission System Heat Losses, Sandia National Laboratories/Albuquerque, SAND82-1138, Meyer, R. D. (Oct 1982) 77 pp. NTIS Order No. DE83003628

Pilot Plant Station Manual; Volume 1: System Description Revision (RADL Item 2-1); 10-MW_e Solar Thermal Central Receiver Pilot Plant Solar Facilities Design Integration, Sandia National Laboratories/Livermore, MDC-G-8544 Vol. 1, Riedesel, R. G. (Sep 1982) 629 pp. NTIS Order No. DE83001667

Pilot Plant Station Manual; Volume 3: Equipment Data Revision (RADL Item 2-1); 10-MW_e Solar Thermal Central Receiver Pilot Plant Solar Facilities Design Integration, Sandia National Laboratories/Livermore, MDC-G-8544 Vol. 3, Riedesel, R. G. (Sep 1982) 180 pp. NTIS Order No. DE83001666

Technical Assessment Guide; Special Report, Sandia National Laboratories/Livermore, EPRI-P-2410-SR, Applegren, G. H., Vejtasa, S. A. (May 1982) 339 pp. NTIS Order No. DE82906430

Temperature Control of Line-Focus Solar Collectors, SERI/TP-252-1463, Wright, J. D., Masterson, P. M. (Sep 1982) 33 pp. NTIS Order No. SERITP2521463

10-MW_e Solar Thermal Central Receiver Pilot Plant; Master Control System As-Built Drawings (RADL Item 6-5); Volume 1: Software Listings; Section 1: Measurement Information File and BCS, Sandia National Laboratories/Livermore, DOE/SF/10499-T159 (Sep 1982) 438 pp. NTIS Order No. DE86001390

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Master Control System As-Built Drawings (RADL Item 6-5); Volume 2: DARMS, SHIMMS, and RLU's, DOE/SF/10499-T162 (Sep 1982) 317 pp. NTIS Order No. DE86001392

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Master Control System As-Built Drawings (RADL Item 6-5); Volume 3: DAS, OCS, and Timing, Sandia National Laboratories/Livermore, DOE/SF/10499-T163 (Sep 1982) 40 pp. NTIS Order No. DE86001393

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Master Control System As-Built Drawings (RADL Item 6-5); Volume 4: SDPC, Section 1: Specification and Configuration, Sandia National Laboratories/Livermore, DOE/SF/10499-T164 (Sep 1982) 286 pp. NTIS Order No. DE86001394

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Master Control System Built Drawings (RADL Item 6-5); Volume 4: SDPC, Section 3: Drawings, Sandia National Laboratories/Livermore, DOE/SF/10499-T166 (Sep 1982) 135 pp. NTIS Order No. DE86001396

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Plant Maintenance/Training Manual (RADL Item 2-37); Section 6: Control and Data Systems, Book 1 of 3, Sandia National Laboratories/Livermore, DOE/SF/10499-T152 (Sep 1982) 344 pp. NTIS Order No. DE86000681

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Plant Maintenance/Training Manual (RADL Item 2-37); Section 3: Electrical Apparatus, Book 1 of 2, Sandia National Laboratories/Livermore, SAN/0499-82 (Sep 1982) 716 pp. NTIS Order No. DE86000716

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Plant Maintenance/Training Manual (RADL Item 2-37); Section 4: Valves, Book 1 of 3, Sandia National Laboratories/Livermore, DOE/SF/10499-T147 (Sep 1982) 663 pp. NTIS Order No. DE86000659

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Plant Maintenance/Training Manual (RADL Item 2-37); Section 4: Valves, Book 2 of 3, Sandia National Laboratories/Livermore, DOE/SF/10499-T148 (Sep 1982) 675 pp. NTIS Order No. DE86000720

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Plant Maintenance/Training Manual (RADL Item 2-37); Section 4: Valves, Book 3 of 3, Sandia National Laboratories/Livermore, DOE/SF/10499-T149 (Sep 1982) 275 pp. NTIS Order No. DE86000718

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Plant Maintenance/Training Manual (RADL Item 2-37); Section 5: Process Instrumentation, Book 1 of 2, Sandia National Laboratories/Livermore, DOE/SF/10499-T150 (Sep 1982) 275 pp. NTIS Order No. DE86000717

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Plant Maintenance/Training Manual (RADL Item 2-37); Section 5: Process Instrumentation, Book 2 of 2, Sandia National Laboratories/Livermore, DOE/SF/10499-T151 (Sep 1982) 369 pp. NTIS Order No. DE86000690

10-MW_e Solar Thermal Central Receiver Pilot Plant; Solar Facilities Design Integration; Plant Maintenance/Training Manual (RADL Item 2-37); Section 8: Special Heliostat Instrumentation and Meteorological Measurements Equipment, Sandia National Laboratories/Livermore, DOE/SF/10499-T155 (Sep 1982) 687 pp. NTIS Order No. DE86000656

Design Approaches for Solar Industrial Process Heat Systems; Nontracking and Line-Focus Collector Technologies, SERI/TR-253-1356, Kutscher, C. F., Davenport, R. L., Dougherty, D. A., Gee, R. C., Masterson, P. M., May, E. K. (Aug 1982) 452 pp. NTIS Order No. DE83003339

ROSET: A Solar Thermal Electric Power Simulation User's Guide, SERI/TR-214-1449, O'Doherty, R. J. (Aug 1982) 86 pp. NTIS Order No. DE82021997

Survey of Manufacturers of Solar-Thermal-Energy Systems, Jet Propulsion Laboratory, DOE/JPL-1060-56, Levine, N., Slonski, M. (Aug 1982) 97 pp. NTIS Order No. DE83005140

Parabolic Dish Solar Thermal Power Annual Program Review Proceedings (December 8-10, 1981), Jet Propulsion Laboratory, DOE/JPL-1060-52 (Jul 1982) 350 pp. NTIS Order No. DE83000474

10-MW_e Solar-Thermal Central-Receiver Pilot Plant; Solar Facilities Design Integration, Master Equipment List (RADL Item 2-19), Sandia National Laboratories/Livermore, DOE/SF/10499-84 (Jul 1982) 240 pp. NTIS Order No. DE83001671

10-MW_e Solar Thermal Central-Receiver Pilot Plant; Solar Facilities Design Integration, Plant Operating/Training Manual (RADL Item 2-36), Sandia National Laboratories/Livermore, DOE/SF/10499-83 (REV) (Jul 1982) 301 pp. NTIS Order No. DE83001670

Coolidge Solar Irrigation Project; 1981 Annual Report, Sandia National Laboratories/Albuquerque, SAND82-0521, Torkelson, L. E., Larson, D. L. (Jun 1982) 128 pp. NTIS Order No. DE83001853

Environmental Assessment of the U.S. Department of Energy's Solar Thermal Technology Program, Sandia National Laboratories/Livermore, UCLA 12-1372, Lindberg, R. G., Daniels, J. I., Hastings, J., Phinney, S. (June 1982) 224 pp. NTIS Order No. DE82019852

Experimental Performance Evaluation of Line-Focus Sun Trackers, SERI/TR-632-646, Gee, R. C. (May 1982) 67 pp. NTIS Order No. DE82015142

10-MW_e Solar Thermal Central Receiver Pilot Plant Operational Test Requirements, Sandia National Laboratories/Livermore, SAND79-8037, Bartel, J. J., Moore, C. W. (May 1982) 103 pp. NTIS Order No. DE82015869

IEA Small Solar-Power Systems Project; Operations Status Report, Sandia National Laboratories/Livermore, DOE/NBM-2020001 (Apr 1982) 23 pp. NTIS Order No. DE8202001

Rotating Field Collector Subsystem; Phase I: Study and Evaluation, Sandia National Laboratories/Livermore, SAND82-8184 (Apr 1982) 145 pp. NTIS Order No. DE83003316

Solar Cogeneration, Sandia National Laboratories/Livermore, DOE/NBM-2019085 (Apr 1982) 20 pp. NTIS Order No. DE82019085

Solar-Cogeneration Assessment Report of Solar-Central-Receiver Cogeneration Conceptual-Design Study Projects, Sandia National Laboratories/Livermore, SAND82-8005, Anderson, J. S. (Apr 1982) 54 pp. NTIS Order No. DE82015868

Annual Technical Report, Fiscal Year 1981, Jet Propulsion Laboratory, DOE/JPL-1060-51 (Mar 1982) 29 pp. NTIS Order No. DE82013332

Hemispherical Bowl Cost Estimating Study, Sandia National Laboratories/Albuquerque, SAND82-7111 (Mar 1982) 33 pp. NTIS Order No. DE82014615

Microprocessor-Based Power Cable Carrier Control (MPC Exp 3), Sandia National Laboratories/Albuquerque, SAND82-0001, Alvis, R. L., Rosborough, J. R. (Mar 1982) 41 pp. NTIS Order No. DE82014518

Performance Testing of the Acurex Solar Collector Model 3001-03, Sandia National Laboratories/Albuquerque, SAND80-0872, Dudley, V. E., Workhoven, R. M. (Mar 1982) 121 pp. NTIS Order No. DE82013389

Chemical Energy Transport for Distributed Solar Thermal Electric Conversion, Final Report, Sandia National Laboratories/Livermore, SAND81-8190, Smith, R. D. (Feb 1982) 63 pp. NTIS Order No. DE82012512

Department of Energy Solar-Central-Receiver Annual Meeting; Claremont, California; 13-15 October 1981, Sandia National Laboratories/Livermore, SAND82-8002 (Feb 1982) 297 pp. NTIS Order No. DE82011932

Midtemperature Solar Systems Test Facility Predictions for Thermal Performance Based on Test Data of Low-to Medium-Temperature Line-Focusing Solar Collectors; Applied Solar Resources, Suntracker Model, Collector, Sandia National Laboratories/Albuquerque, SAND82-0092/5, Harrison, T. D. (Feb 1982) 19 pp. NTIS Order No. DE82015502

Midtemperature Solar Systems Test Facility Predictions for Thermal Performance Based on Test Data of Low-to Medium-Temperature Line-Focusing Solar Collectors; E-Systems Fresnel Lens Collector, Sandia National Laboratories/Albuquerque, SAND82-0092/2, Harrison, T. D. (Feb 1982) 26 pp. NTIS Order No. DE82012606

Midtemperature Solar Systems Test Facility Predictions for Thermal Performance Based on Test Data of Low- to Medium-Temperature Line-Focusing Solar Collectors; Sunpower Systems Solar Collector, Sandia National Laboratories/Albuquerque, SAND82-0092/3, Harrison, T. D. (Feb 1982) 54 pp. NTIS Order No. DE82012609

Midtemperature Solar Systems Test Facility Predictions for Thermal Performance Based on Test Data of Low- to Medium-Temperature Line-Focusing Solar Collectors; Whiteline Model W-11A Collector, Sandia National Laboratories/Albuquerque, SAND82-0092/4, Harrison, T. D. (Feb 1982) 26 pp. NTIS Order No. DE82012057

Program for Predicting Thermal Performance Based on Test Data of Low- to Medium-Temperature Line-Focusing, Concentrating Solar Collectors, Sandia National Laboratories/Albuquerque, SAND82-0092/1, Harrison, T. D. (Feb 1982) 18 pp. NTIS Order No. DE82012605

Control System Theory of Operation, Sandia National Laboratories/Livermore, DOE/SF/10539-13 (Jan 1982) 10 pp. NTIS Order No. DE84011438

Economic and Performance Potential of Selected Improvements to Parabolic Troughs, SERI/TP-632-1319, Conference Version, Gee, R. C., Murphy, L. M. (Jan 1982) 7 pp. NTIS Order No. DE82010402

Integrated Alternative Energy Systems for Use in Small Communities, SERI/TP-731-1057, Thornton, J. P. (Jan 1982) 21 pp. NTIS Order No. DE82007769

Software/Firmware Design Specification for 10-MW_e Solar Thermal Central Receiver Pilot Plant, Sandia National Laboratories/Livermore, MCR-80-1377A, Ladewig, T. D. (Jan 1982) 928 pp. NTIS Order No. DE82007235

Control System for Prototype Heliostats, Sandia National Laboratories/Albuquerque, SAND82-0578C, Aden, R. D. (1982) 6 pp. NTIS Order No. DE82012780

Solar Ponds

Hydrodynamics and Thermodynamics of Solar Ponds, SERI/TP-252-3088, Zangrando, F. (Dec 1986) 32 pp. NTIS Order No. DE87001124

Mixing in a Double-Diffusive Partially Stratified Fluid, SERI/TR-252-2942, Muñoz, D. R., Zangrando, F. (Dec 1986) 133 pp. NTIS Order No. DE87001131

Solar Thermal Technology Program Bibliography, 1973–1985, SERI/SP-272-3008, (Dec 1986) 192 pp. NTIS Order No. DE86010728

Entrainment in Diffusive Thermohaline Systems; Application to Salt Gradient Solar Ponds; A Subcontract Report, SERI/STR-252-2722, Atkinson, J. F., Adams, E. E., Melville, W. K., Harleman, D. R. F. (Jul 1985) 329 pp. NTIS Order No. DE85012161

Review of SERI Solar Pond Work, SERI/TR-252-2322, Zangrando, F., Johnson, D. H. (Jul 1985) 54 pp. NTIS Order No. DE85012162

Analysis of Simultaneous Heat and Mass Transfer in Soils Below Solar Ponds, SERI/TP-253-2744, Leboeuf, C. M. (Jun 1985) 5 pp. NTIS Order No. DE85012163

User's Manual for Massachusetts Institute of Technology Solar Thermal Pond Program (MITSOL): A Subcontract Report, SERI/STR-252-2679, Atkinson, J. F., Adams, E. E., Salhotra, A., Harleman, D. R. F. (Jun 1985) 116 pp. NTIS Order No. DE85012147

Energy from Low Temperature Differences, SERI/TP-252-2693, Parsons, B. K. (May 1985) 7 pp. NTIS Order No. DE85008817

Experimental Observations of Double Diffusive Natural Convection in Solar Ponds with Nonlinear Salinity Profiles, SERI/TP-252-2677, Kirkpatrick, A. T., Gordon, R. G., Johnson, D. H. (Apr 1985) 7 pp. NTIS Order No. DE85000515

On Heat and Mass Exchange in a Partially Stratified Fluid, SERI/TP-252-2295, Zangrando, F., Green, H. J., Fisher, E. M. (Sep 1984) 6 pp. NTIS Order No. DE85000528

Site-Specific Research Conducted in Support of the Salton Sea Solar Pond Project, FY 1982 Report, Jet Propulsion Laboratory, DOE/SF/11592-1, French, R. L., Marsh, H. E., Roschke, E. J., Wu, Y. C. (Sep 1984) 110 pp. NTIS Order No. DE85004580

Salt-Gradient Solar Ponds: Summary of U.S. Department of Energy Sponsored Research, DOE/SF/11592-2, French, R. L., Johnson, D. H., Jones, G. F., Zangrando, F. (Aug 1984) 165 pp. NTIS Order No. DE85004581

Direct-Contact Condensers for Solar Pond Power Plants, SERI/TP-252-2337, Fisher, E. M., Wright, J. D. (Jul 1984) 7 pp. NTIS Order No. DE84013026

Doubly Diffusive Linear Stability with Nonconstant Gradients, SERI/TR-252-2052, Zangrando, F., Bertram, L. A. (Jun 1984) 58 pp. NTIS Order No. DE84013008

Direct-Contact Condensers for Solar Pond Power Production, SERI/TR-252-2164, Fisher, E. M., Wright, J. D. (May 1984) 75 pp. NTIS Order No. DE84004510

Effect of Soil Conditions on Solar Pond Performance, SERI/TP-253-2157, Leboeuf, C. M., Johnson, D. H. (Jan 1984) 6 pp. NTIS Order No. DE84000096

Direct-Contact Preheater/Boilers for Solar Pond Power Plant, SERI/TP-252-1968, Wright, J. D. (Dec 1983) 9 pp. NTIS Order No. DE84000098

Conceptual Design of a 20-Acre Salt Gradient Solar Pond System for Electric Power Production at Truscott, Texas, SERI/TR-253-1868, May, E. K., Leboeuf, C. M., Waddington, D. (Jul 1983) 45 pp. NTIS Order No. DE83011999

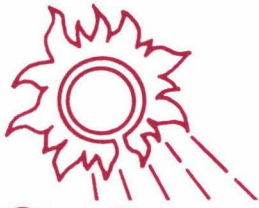
Behavior of Nine Solar-Pond Candidate Salts, SERI/TR-253-1512, Schell, D. J., Leboeuf, C. M. (Jan 1983) 38 pp. NTIS Order No. DE83006029

Conceptual Design of the Truscott Brine Lake Solar Pond System; Volume II: Utility—Integrated Scenario, SERI/TR-253-1833, May, E. K., Leboeuf, C. M., Waddington, D. (Dec 1982) 91 pp. NTIS Order No. DE83008133

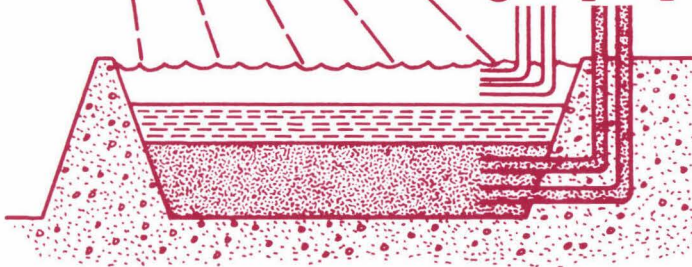
Truscott Brine Lake Solar Pond System Conceptual Design, SERI/TP-253-1667, Leboeuf, C. M., May, E. K. (Aug 1982) 6 pp. NTIS Order No. DE82020923

Organic Rankine Cycle Coupled to a Solar Pond by Direct-Contact Heat Exchange; Election of a Working Fluid, SERI/TR-631-1122-R, Wright, J. D. (Jun 1982) 35 pp. NTIS Order No. DE81028400

Sizing of Direct-Contact Preheater/Boilers for Solar Pond Power Plants, SERI/TR-252-1401, Wright, J. D. (May 1982) 66 pp. NTIS Order No. DE82019516



Solar Ponds: A Selected Bibliography



Sustained interest in solar ponds is evident through the steady increase in the literature about this technology. The growth of published material in this field has created a need to capture the available documents in one source.

Solar Ponds: A Selected Bibliography represents a major step in meeting this challenge. The 581 citations contained in this bibliography are the result of an exhaustive searching of traditional sources as well as 13 computerized data bases.

The citations are organized alphabetically by author. Detailed access to this valuable bibliography is provided by a topical index divided into 13 major topics.

Available from the National Technical Information Service. DE84013031. \$11.95.

Heat and Mass Extraction from Solar Ponds; Analysis and Development of a Laboratory Facility, SERI/TR-252-1569, Zangrando, F. (Apr 1982) 55 pp. NTIS Order No. DE82013888

Regional Applicability and Potential of Salt-Gradient Solar Ponds in the United States; Volume I: Executive Summary, Jet Propulsion Laboratory, DOE/JPL-1060-50, Vol. 1, Lin, E. I. H. (Mar 1982) 19 pp. NTIS Order No. DE82009128

Regional Applicability and Potential of Salt-Gradient Solar Ponds in the United States; Volume II: Detailed Report, Jet Propulsion Laboratory, DOE/JPL-1060-50, Vol. 2, Lin, E. I. H., French, R. L., Singer, M. J., Wu, Y. C., McMurrin, J. C., Barbieri, R. H., Walton, A. L., Jones, S. C., Hurick, M. G., Levine, N., Richter, P. H. (Mar 1982) 500 pp. NTIS Order No. DE82009811

Heat Rejection and Energy Extraction within Solar Ponds, SERI/RR-252-1393, Jaluria, Y. (Feb 1982) 57 pp. NTIS Order No. DE82009487

Solar Pond Power Plant Feasibility Study for Davis, California, Jet Propulsion Laboratory, NASA-CR-168819, Wu, Y. C., Singer, M. J., Marsh, H. E., Harris, J., Walton, A. L. (Feb 15, 1982) 73 pp. NTIS Order No. N82-22653/1

Laboratory Experiments on Heat and Mass Extraction from Solar Ponds, Second Quarterly Report, July 1, 1981–September 30, 1981, SERI/PR-252-1461, Zangrando, F. (Jan 1982) 19 pp. NTIS Order No. DE82007770

Review of the Salt-Gradient Solar Pond Technology, Jet Propulsion Laboratory, DOE/SF/11552-1, Lin, E. I. H. (Jan 1982) 60 pp. NTIS Order No. DE82011493

Salton Sea Project; Phase I: Final Report, Jet Propulsion Laboratory, DOE/JPL-1060-54, Peelgren, M. L. (Jan 1982) 133 pp. NTIS Order No. DE82009131

Storage

Review of the Molten Salt Electric Experiment: A Solar Central Receiver Project, Sandia National Laboratories/Livermore, SAND86-8249, Delameter, W. R., Bergan, N. E. (Dec 1986) 34 pp. NTIS Order No. DE87003592.

Solar Thermal Technology Program Bibliography, 1973-1985, SERI/SP-272-3008, (Dec 1986) 192 pp. NTIS Order No. DE86010728

Analytical Model of an Irrigated Packed-Bed Direct-Contact Heat Exchanger at High Temperature, SERI/TP-252-2976, Bohn, M. S. (Nov 1986) 8 pp. NTIS Order No. DE87001119

Testing of the Molten Salt Electric Experiment Solar Central Receiver in an External Configuration, Sandia National Laboratories/Livermore, SAND86-8010, Bergan, N. E. (Oct 1986) 80 pp. NTIS Order No. DE87002745

SERI Solar Energy Storage Program: FY 1985 Annual Report, SERI/PR-231-2954 (Sep 1986) 25 pp. NTIS Order No. DE86014508

10-MW_e Solar Thermal Central Receiver Pilot Plant; Thermal Storage Subsystem Evaluation; Final Report, Sandia National Laboratories/Livermore, SAND86-8212, Faas, S. E., Thorne, L. R., Fuchs, E. A., Gilbertsen, N. D. (Jun 1986) 113 pp. NTIS Order No. DE86011730

Evaluation of Valve Packing Materials for Long-Term Use in Molten Nitrate Salt, Sandia National Laboratories/Livermore, SAND86-8207, Bradshaw, R. W. (Mar 1986) 37 pp. NTIS Order No. DE86008837

Integrated Heat Pipe-Thermal Storage Design for a Solar Receiver, Los Alamos National Laboratory, LA-UR-86-1840, Keddy, E. S., Sena, J. T., Woloshun, K., Merrigan, M. A., Heidenreich, G. (1986) 8 pp. NTIS Order No. DE86011235

Molten Salt Electric Experiment Steam Generator Subsystem; Final Report, Sandia National Laboratories/Livermore, SAND85-8181 (Apr 1986) 334 pp. NTIS Order No. DE86011380

High Temperature Molten Salt Storage Concept; Final Subcontract Report, SERI/STR-231-2836, Ives, J. K., Newcomb, J. C., Pard, A. G. (Oct 1985) 96 pp. NTIS Order No. DE85016874

Molten Salt Electric Experiment (MSEE); Phase I Report; Volume I, Sandia National Laboratories/Livermore, SAND85-8175-Vol. 1 (Aug 1985) 56 pp. NTIS Order No. DE86001118

Molten Salt Electric Experiment (MSEE); Phase I Report; Volume III, Sandia National Laboratories/Livermore, SAND85-8175-Vol. 3 (Aug 1985) 565 pp. NTIS Order No. DE86001120

High Temperature Molten Salt Containment, SERI/TR-252-2490, Wang, K. Y., West, R. E., Kreith, F., Lynn, P. P. (May 1985) 64 pp. NTIS Order No. DE85012152

High-Temperature Sensible Heat Storage Options, SERI/TP-252-2702, Wang, K. Y., West, R. E., Kreith, F., Lynn, P. P. (May 1985) 21 pp. NTIS Order No. DE85008798

Evaluation of Thermal Storage for Liquid-Metal, Solar Thermal Receivers, SERI/TR-252-1956, Copeland, R. J. (Dec 1984) 148 pp. NTIS Order No. DE85002929

10-MW_e Solar Thermal Central Receiver Pilot Plant; Mode 5 Charging Only Acceptance Test Procedure 1150, Sandia National Laboratories/Livermore, SAND84-8183 (Dec 1984) 113 pp. NTIS Order No. DE85005303/XAB

High Temperature Sensible Heat Storage Options, SERI/TP-252-2569, Wang, K. Y., Kreith, F., West, R. E., Lynn, P. P. (Nov 1984) 8 pp. NTIS Order No. DE85000534

Thermal Storage Test Report; TSU Bed Conditioning (1040A); Thermal Storage System Controls Test (1040B), Sandia National Laboratories/Livermore, SAND84-8186 (Nov 1984) 260 pp. NTIS Order No. DE85010033

Exploratory Corrosion Tests on Materials and Fluids for Advanced High-Temperature Molten-Salt Storage, SERI/TP-255-2199, Coyle, R. T., Burrows, R. W., Goggin, R. M., Thomas, T. M. (Oct 1984) 46 pp. NTIS Order No. DE85002911

Performance and Cost of Energy Transport and Storage Systems for Dish Applications Using Reversible Chemical Reactions, Jet Propulsion Laboratory, DOE/JPL-1060-79, Schredder, J. M. (Oct 1984) 56 pp. NTIS Order No. DE85006657

SERI Solar Energy Storage Program; FY 1983 Annual Report, SERI/TR-231-2131, Luft, W., Bohn, M. S., Copeland, R. J., Nix, R. G. (May 1984) 56 pp. NTIS Order No. DE84004525

Thermal Energy Storage at 900°C, SERI/TP-252-2359, Copeland, R. J., West, R. E., Kreith, F. (May 1984) 5 pp. NTIS Order No. DE84004589

Thermochemical Energy Transport Systems Study, Sandia National Laboratories/Albuquerque, SAND83-7464 (Mar 1984) 75 pp. NTIS Order No. DE84011604

Benefits from Energy Storage Technologies, SERI/TR-252-2107, Copeland, R. J. (Nov 1983) 6 pp. NTIS Order No. DE84000097

Comparative Ranking of Thermal Storage Systems; Volume 1: For Water/Steam, Organic Fluid, and Air/Brayton Solar Thermal Collector-Receivers, SERI/TR-631-1283-Volume 1, Copeland, R. J., Ullman, J. (Nov 1983) 116 pp. NTIS Order No. DE84000091

Direct-Contact High-Temperature Thermal Energy Storage Heat Exchanger; Final Subcontract Report, SERI/STR-230-2065, Alario, J., Brown, R. (Sep 1983) 99 pp. NTIS Order No. DE84000012

Advanced High-Temperature Molten-Salt Storage Research, SERI/TP-252-2055, Copeland, R. J., Coyle, R. T. (Aug 1983) 5 pp. NTIS Order No. DE84000001

Thermal Energy Storage for Process Heat and Building Applications, SERI/TR-231-1780, Kriz, T. A., Christensen, C. B., Gaul, H. W., Leach, J. W., Rabl, A., Sillman, S., Swet, C. J., Ullman, J. (Jun 1983) 101 pp. NTIS Order No. DE83011981

Raft Thermocline Thermal Storage, SERI/TR-252-1969, Copeland, R. J., Green, H. J. (May 1983) 5 pp. NTIS Order No. DE83011962

New Thermal Energy Storage Concepts for Solar Thermal Applications; Final Subcontract Report, SERI/STR-231-1860, Petri, R. J., Ong, E. T., Claar, T. D., Marianowski, L. G. (Apr 1983) 87 pp. NTIS Order No. DE83011967

Value and Cost Analyses for Solar Thermal Storage Systems, SERI/TP-231-1966, Luft, W., Copeland, R. J. (Apr 1983) 5 pp. NTIS Order No. DE83009110

SERI Solar Energy Storage Program; FY 1982 Annual Report, SERI/TR-231-1876, Luft, W., Bohn, M. S., Copeland, R. J., Nix, R. G. (Mar 1983) 74 pp. NTIS Order No. DE83011972

Oil/Salt Hydrate Direct-Contact Heat Exchange Experiments, SERI/TR-252-1614, Wright, J. D., Bohn, M. S., Barlow, R. S. (Jan 1983) 30 pp. NTIS Order No. DE83009396

Thermal Storage Alternatives for Today's Active Solar Heating and Cooling Systems

Current and practical information for selecting, designing, and installing thermal energy storage in active solar systems is now available in the second edition of the **Design and Installation Manual for Thermal Energy Storage**. A helpful tool in selecting the best storage systems for the site-specific needs, this manual provides a comprehensive treatment of the two types of thermal energy storage — sensible and latent, as well as domestic hot water thermal energy systems.

Prepared by Argonne National Laboratory, the manual is written primarily for design and installation professionals in the solar energy industry. Especially useful to contractors and installers is conceptual background information provided on the integral parts of a typical storage system.

Viewed as a comprehensive work, the most valuable asset of this manual is that it allows the reader to compare alternatives, choose the most practical system, and avoid the pitfalls that have plagued some earlier thermal energy storage systems.

2nd Edition. NTIS Order # ANL-79-15 Ed.2. \$30.95

High Temperature Integrated Thermal Energy Storage System for Solar Thermal Applications: Final Subcontract Report, SERI/STR-231-1812, Bruckner, A. P., Hertzberg, A. (Dec 1982) 116 pp. NTIS Order No. DE83004755

Long Duration Thermal Storage for Solar Thermal High Pressure Steam IPH, SERI/TP-252-1869, Copeland, R. J., Stern, C., Leach, J. W. (Dec 1982) 5 pp. NTIS Order No. DE83005127

Advanced, High-Temperature Molten Salt Storage, SERI/TP-252-1684, Copeland, R. J. (Aug 1982) 7 pp. NTIS Order No. DE82020852

Analysis of Thermal Storage Systems, SERI/TP-252-1685, Copeland, R. J. (Aug 1982) 7 pp. NTIS Order No. DE82020981

Direct-Contact Thermal Storage Research, SERI/TP-252-1691, Wright, J. D., Bohn, M. S. (Aug 1982) 8 pp. NTIS Order No. DE82020989

Solar Storage for Process Heat and Building Application; A Review of Prior Assessments, SERI/TR-231-1595, Kriz, T. A., Swet, C. J. (Aug 1982) 113 pp. NTIS Order No. DE82019791

SERI Solar Energy Storage Program in FY 1982, SERI/TP-231-1660, Luft, W. (Jul 1982) 5 pp. NTIS Order No. DE82018306

SERI Solar Energy Storage Program; FY 1981 Annual Report, SERI/PR-231-1570, Baylin, F., Copeland, R. J., Kotch, A., Kriz, T. A., Luft, W., Nix, R. G., Wright, J. D. (May 1982) 67 pp. NTIS Order No. DE82019161

Development of a Long-Life High-Temperature Catalyst for the SO₂/SO₃ Energy Storage System, Sandia National Laboratories/Livermore, SAND81-8182, Schmidt, E. W., Day, D. J., Fairfull, G. S., Gates, D. H., Li, C. H., Poole, D. R. (Mar 1982) 134 pp. NTIS Order No. DE82009723

Effects on Soils from Hot Storage Tanks, Sandia National Laboratories/Livermore, SAND81-8191 (Mar 1982) 148 pp. NTIS Order No. DE82009843

Chemical Energy Transport for Distributed Solar Thermal Electric Conversion; Final Report, Sandia National Laboratories/Livermore, SAND81-8190, Smith, R. D. (Feb 1982) 63 pp. NTIS Order No. DE82012512

Experimental Study of Single Media Thermocline Thermal-Energy Storage, Sandia National Laboratories/Albuquerque, SAND81-2580C, Gross, R. J. (1982) 37 pp. NTIS Order No. DE82006769

Standards, Tests, and Measurements

Solar Thermal Technology Program Bibliography, 1973–1985, SERI/SP-272-3008 (Dec 1986) 192 pp. NTIS Order No. DE86010728

Viscosity Measurement of Molten Carbonate Salt, SERI/STR-252-2905, Janz, G. J. (Sep 1986) 73 pp. NTIS Order No. DE86014511

10-MW_e Solar Thermal Central Receiver Pilot Plant; Modes 2, 3, 4, and 7 (Tests 1120, 1130, 1140, and 1170) Test Report, Sandia National Laboratories/Livermore, SAND86-8182 (Aug 1986) 314 pp. NTIS Order No. DE87001844

Solar One Solar Thermal Central Receiver Pilot Plant 1984 Meteorological Data Report; Draft, Sandia National Laboratories/Livermore, SAND86-8181 (Jul 1986) 358 pp. NTIS Order No. DE86016039

Utilizing Spreadsheets for Analyzing Solar Thermal Central Receiver Power Plant Designs, Sandia National Laboratories/Livermore, SAND86-8011, Norris, H. F., Jr. (Jul 1986) 73 pp. NTIS Order No. DE86013372

Monograph Series No. 3; 10-MW_e Solar Thermal Central Receiver Pilot Plant Receiver Solar Absorbance Measurements and Results, Sandia National Laboratories/Livermore, SAND86-8210, Baker, A. F. (Jun 1986) 40 pp. NTIS Order No. DE86011910

10-MW_e Solar Thermal Central Receiver Pilot Plant Mode 5 (Test 1150) and Mode 6 (Test 1160) Test Report, Sandia National Laboratories/Livermore, SAND86-8175 (Jun 1986) 230 pp. NTIS Order No. DE86012006

CLEA: The Closed Loop Efficiency Analysis Facility for Thermochemical Energy Transport Studies, Sandia National Laboratories/Albuquerque, SAND86-0590, Hawn, D. C., Fish, J. D. (May 1986) 69 pp. NTIS Order No. DE86011992

Application of RELAP4/MOD6 to Analysis of Solar-Thermal Power Plants; Control System Modeling, Sandia National Laboratories/Albuquerque, SAND86-0852, Byers, R. K. (Apr 1986) 39 pp. NTIS Order No. DE86011848

SOLAVG: Radially Averaged Optical Power Ratio Calculations; the Crosbyton Solar Power Project, DOE/AL/21557-T5, Ford, W. T., Anderson, R. M. (Aug 1985) 155 pp. NTIS Order No. DE86004960

Cloud Shading Direct Solar Radiation Model for the Crosbyton Solar Power Project, DOE/AL/21557-T2, Peterson, R. E., Smalley, D. J. (Jun 1985) 123 pp. NTIS Order No. DE86000002

Experimental Test and Evaluation Phase of the 10-MW_e Solar Thermal Central Receiver Pilot Plant, Sandia National Laboratories/Livermore, SAND85-8015, Radosevich, L. G. (Sep 1985) 295 pp. NTIS Order No. DE86005647

Integrating Sphere Spectrometer for High-Temperature Materials Characterization, SERI/TP-255-2771, Masterson, K. D., Jorgensen, G. J., Burrows, R. W., Schissel, P. O. (Aug 1985) 10 pp. NTIS Order No. DE85012170

View-Limiting Shrouds for Insolation Radiometers, Jet Propulsion Laboratory, DOE/JPL-1060-88, Dennison, E. W., Trentelman, G. F. (May 1985) 27 pp. NTIS Order No. DE85017590

Particle Curtain Generator for Optical Property Measurements of Solid Particles, Sandia National Laboratories/Livermore, SAND84-8255, Prescott, G. H., Steele, B. R. (Jan 1985) 10 pp. NTIS Order No. DE85005784

10-MW_e Solar Pilot Plant, Daggett, California, Nitrogen Preoperational Test Procedure 905, Revision 0, Sandia National Laboratories/Livermore, DOE/SF/10499-T120 (1985) 26 pp. NTIS Order No. DE86000710

Development and Testing of Parabolic Dish Concentrator No. 1, Jet Propulsion Laboratory, DOE/JPL-1060-81, Dennison, E. W., Thostesen, T. O. (Dec 1984) 38 pp. NTIS Order No. DE85014500

10-MW_e Solar Thermal Central Receiver Pilot Plant; Mode 1: Turbine Direct, Acceptance Test, Procedure 1110, Sandia National Laboratories/Livermore, SAND84-8185, Raetz, J. E. (Dec 1984) 122 pp. NTIS Order No. DE85005797

10-MW_e Solar Thermal Central Receiver Pilot Plant; Mode 5: Charging Only Acceptance Test, Procedure 1150, Sandia National Laboratories/Livermore, SAND84-8183 (Dec 1984) 113 pp. NTIS Order No. DE85005303/XAB

Nonlinear Thermoelastic Stress Analysis of Spherically Curved Solar Panels, DOE/AL/21557-T3, Vallabhan, C. V. G., Vungutur, K., Selvam, R. P. (Oct 1984) 89 pp. NTIS Order No. DE86000001

Experimental Determinations of the Passive/Active Transition for Iron in 1-M Sulfuric Acid; A Subcontract Report, SERI/STR-255-1766, Russell, P. P., Newman, J. (Jun 1984) 28 pp. NTIS Order No. DE84013005

Software Used with the Flux Mapper at the Solar Parabolic Dish Test Site, Jet Propulsion Laboratory, DOE/JPL-1060-78, Miyazono, C. (Sep 1984) 63 pp. NTIS Order No. DE85004584

Solar One: Solar Thermal Central Receiver Pilot Plant; 1983 Meteorological Data Report, Sandia National Laboratories/Livermore, SAND84-8180 (Jun 1984) 463 pp. NTIS Order No. DE84015987

Materials Characterization Using Ion, Electron, and Photon Probes, SERI/TR-255-2217, Czanderna, A. W. (May 1984) 53 pp. NTIS Order No. DE84004518

Modeling of the DOE-Sponsored IPH Field-Test Experiments, SERI/TP-253-2324, Lewandowski, A. A. (Apr 1984) 6 pp. NTIS Order No. DE84004501

1984 Program of Work: Test and Evaluation of CRS and DCS Plants, Sandia National Laboratories/Livermore, DOE/DR/00789-T1, Martin, J. G., Wattiez, P., Munox, F. R. (Mar 1984) 55 pp. NTIS Order No. DE84012477

Matrix Approach to Testing Mirrors; Part 2, SERI/TR-255-1627, Masterson, K. D., Czanderna, A. W., Blea, J., Goggin, R. M., Gutierrez, M., Jorgensen, G. J., McFadden, J. D. (Jul 1983) 114 pp. NTIS Order No. DE83011996

Transient Response of Circular Foil Heat-Flux Gages, Sandia National Laboratories/Albuquerque, SAND83-0263, Grothus, M. A., Mulholland, G. P., Hills, R. G., Marshall, B. W. (Jul 1983) 180 pp. NTIS Order No. DE83017785

10-MW_e Solar Thermal Central Receiver Pilot Plant; Thermal Storage Subsystem Evaluation; Subsystem Activation and Controls Testing Phase, Sandia National Laboratories/Livermore, SAND83-8015, Faas, S. E. (Jul 1983) 60 pp. NTIS Order No. DE83016447

Solar One: Solar-Thermal Central-Receiver Pilot Plant 1982 Meteorological Data Report, Sandia National Laboratories/Livermore, SAND83-8216 (Jun 1983) 179 pp. NTIS Order No. DE83013622

Matrix Approach for Testing Mirrors; Part 1, SERI/TR-255-1504, Masterson, K. D., Lind, M. A. (Apr 1983) 35 pp. NTIS Order No. DE83009398

Development of a Predictive Computer Code for Heat Losses from Solar External Receivers, Sandia National Laboratories/Livermore, SAND82-8183, Afshari, B., Ferziger, J. H. (Feb 1983) 48 pp. NTIS Order No. DE83007310

Research and Development Project Evaluation and Selection Methods for the Solar Thermal Technology Program, SERI/TR-251-1573, Krawiec, F. (Feb 1983) 62 pp. NTIS Order No. DE83008296

Testing of a Prototype Fresnel Lens Concentrator for Thermal Applications, SERI/TP-253-1893, Lewandowski, A. A. (Feb 1983) 7 pp. NTIS Order No. DE83007312.

Development of a Consensus Standard for Determining Thermal Performance of High Concentration Ratio Solar Collectors, SERI/TP-253-1839, Blackmon, J. B., Linskens, M. C., Reed, K. A. (Dec 1982) 5 pp. NTIS Order No. DE83005129

Solar-Thermal-Industry Status and Future Needs, Sandia National Laboratories/Livermore, SAND82-8030, Radosevich, L. G. (Dec 1982) 18 pp. NTIS Order No. DE82020885

Development of a Solar Flux Tracker for Parabolic Trough Collectors, Sandia National Laboratories/Albuquerque, SAND82-1600, Boultinghouse, K. D. (Sep 1982) 38 pp. NTIS Order No. DE83005361

Techniques for Elevated Temperature Mechanical Testing, Sandia National Laboratories/Albuquerque, NUREG/CR-2793, Schmale, D. T., Cross, R. W. (Jun 1982) 33 pp. NTIS Order No. DE82019866

Central Receiver Infrared Temperature-Measurement Experiment, Sandia National Laboratories/Livermore, SAND81-8022, Gibson, J. C. (Apr 1982) 42 pp. NTIS Order No. DE82013816

Correlations of Insolation and Wind Data for SOLMET Stations, Sandia National Laboratories/Albuquerque, SAND82-0094, Randall, D. E., Grandjean, N. R. (Apr 1982) 112 pp. NTIS Order No. DE82015490

Contour-Measuring Device for Solar Mirrors, Sandia National Laboratories/Livermore, SAND82-8202, Burolla, V. P. (Feb 1982) 34 pp. NTIS Order No. DE82007992

High-Intensity Flux Mapper for Concentrating Solar Collectors, SERI/TP-215-1509, Cannon, T. W., Gaul, H. W. (Feb 1982) 12 pp. NTIS Order No. DE82008481

Interim Structural Design Standard for Solar Energy Applications (Evaluation of ANL Tests); Final Report, Sandia National Laboratories/Livermore, SAND80-8193, Rao, M. S. M. (Feb 1982) 72 pp. NTIS Order No. DE82008768

Central Receiver Test Facility Assembly Building, Sandia National Laboratories/Albuquerque, SAND81-1735, Maxwell, C. R., Holmes, J. T. (Jan 1982) 19 pp. NTIS Order No. DE82010853

Determining Solar Collector Array Performance Using Inexpensive Infrared Scanning Techniques, SERI/TR-721-1161-C.V., Eden, A., Haverty, T. (Jan 1982) 6 pp. NTIS Order No. DE82010489

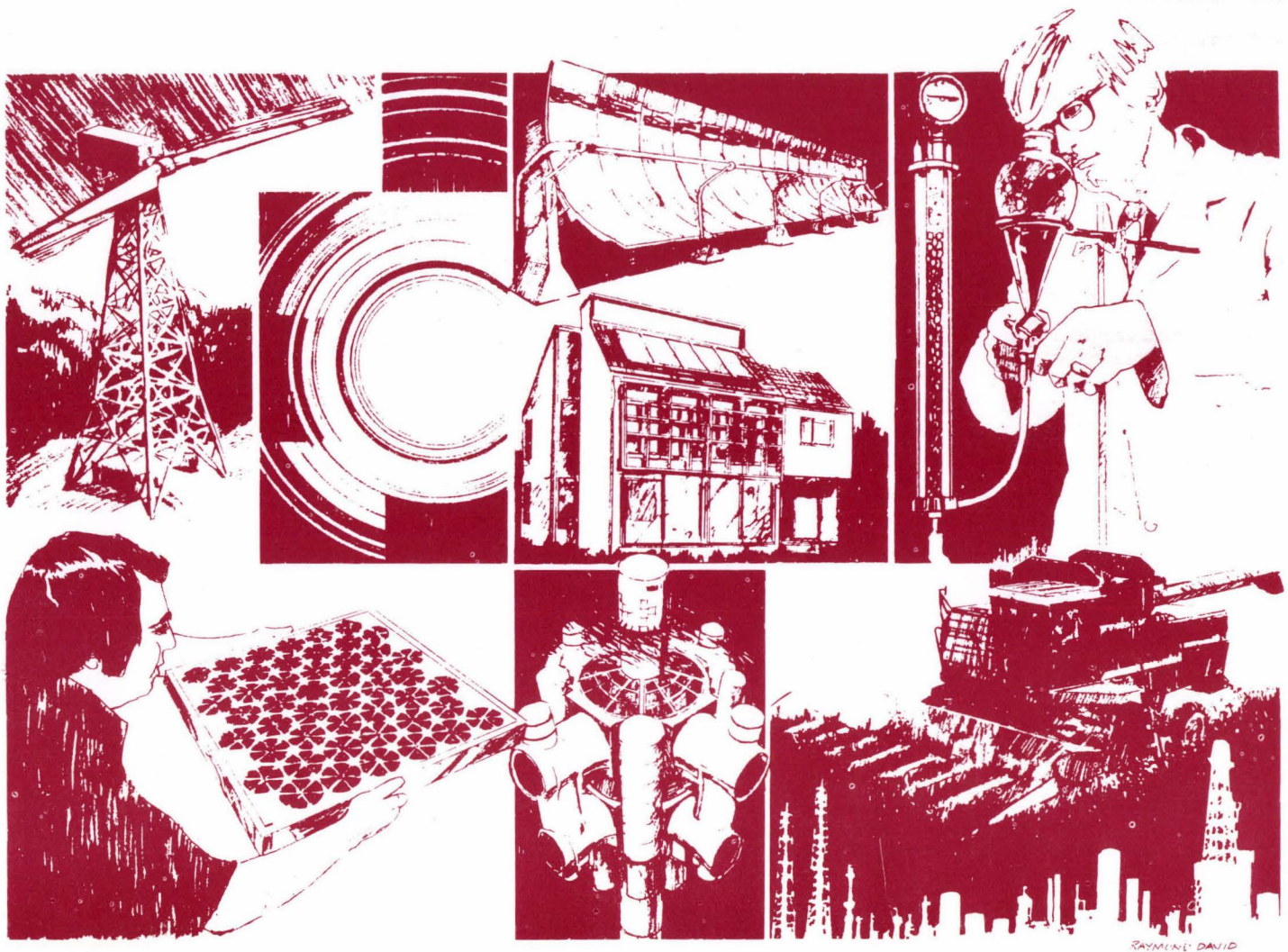
High Temperature Materials Experience at the Central Receiver Test Facility, Sandia National Laboratories/Albuquerque, SAND82-0263C, Holmes, J. T. (Jan 1982) 14 pp. NTIS Order No. DE82010356

Infrared Sensor for Remote Temperature Monitoring of Solar Thermal Central Receivers, Sandia National Laboratories/Livermore, ATR-81(7747)-4, Warren, D. W., Eden, H. D., Thompson, J. S. (Jan 1982) 24 pp. NTIS Order No. DE84009889

Concentrated Solar-Flux Measurements at the IEA-SSPS Solar- Central-Receiver Power Plant, Tabernas, Almeria (Spain); Final Report, Technical Report No. 2/82, Sandia National Laboratories/Livermore, DOE/NBM-2020000, Von Tobel, G., Schelders, C., Real, M. (1982) 176 pp. NTIS Order No. DE82020000

Results of Solar Testing of Circular Foil Heat-Flux Sensors at the White Sands Solar Furnace, Sandia National Laboratories/Albuquerque, SAND81-2390C, Bainbridge, B. L. (1982) 27 pp. NTIS Order No. DE82006282

registration application for the national solar technical audience file



STAY SOLAR INFORMED WITH INFORMATION FROM SERI

the Solar Energy Research Institute is maintaining a file of professionals in the United States interested in being informed on a full range of solar technologies. If you wish to be included in the file, please fill out the registration form on the reverse side of this page. Registrants will receive periodic notices of solar information published by various federal laboratories, as well as announcements of conferences, seminars, and other items of possible interest that fall within subject areas selected.

Are you on our mailing list? If not, and you live in the United States, stay informed of current solar research developments in your area of interest by completing this form and returning it to

Solar Energy Research Institute
 Document Distribution Service
 1617 Cole Boulevard
 Golden, Colorado 80401-3393

1. If your mailing label is complete and correct, please attach it over the first 5 lines.

a) Name _____
First M.I. Last

Title/Department _____

Organization _____

Street _____

City _____ State _____ Zip _____

Telephone (____) _____-____

May we release your name to other solar mailing lists? Yes No

Signature _____ Date _____

- b) Is your interest in solar primarily as a student, homeowner, or other non-professional?
 Yes No If your interest in solar is professional, for what type of organization do you work?
- | | | |
|--|--|--|
| 1. <input type="checkbox"/> Federal Government | 4. <input type="checkbox"/> Other Government | 7. <input type="checkbox"/> Federal Contractor |
| 2. <input type="checkbox"/> Educational Institute, Library | 5. <input type="checkbox"/> Other Non-Profit | 8. <input type="checkbox"/> Utility |
| 3. <input type="checkbox"/> Commercial | 6. <input type="checkbox"/> Industrial | 9. <input type="checkbox"/> Agriculture |
- Other (please specify) _____

2. Which of the Solar Fields listed below are of MAJOR interest to you?

Please select up to 5 fields and insert the corresponding letter in the boxes in order of importance to you.

1st	2nd	3rd	4th	5th

- A. General Solar (no specific field)
- B. Active Space Heating/Cooling/Hot Water
- C. Alcohol Fuels from Biomass
- D. Biomass (except Alcohol Fuels)
- E. Ocean Energy Systems
- F. Passive Solar Systems
- G. Photoconversion/Thermoconversion Processes
- H. Photovoltaic Systems
- I. Process Heat Systems (Industrial or Agricultural)
- J. Solar Thermal Electric Power Systems
- K. Advanced Energy Storage Systems (still in R&D stage)
- L. Wind Energy Conversion Systems
- M. Hybrid/Total Energy Systems
- N. Energy Conservation

3. For which topic(s) do you MOST need information:

Please check up to 7 topics of **major** importance to you for the Solar Field you ranked 1st in Question 2. This will **not** disqualify you from receiving information on other topics.

Contacts

- 11. Information Sources
- 12. Conferences, Events
- 13. Courses, Training
- 14. Manufacturers, Distributors
- 15. Key Contacts

Site-Specific

- 21. Building and Zoning Codes, Regulations
- 22. Climatological Data
- 23. State Laws

System Descriptions

- 31. Demonstrations
- 32. General System Costs and Performance
- 34. System Descriptions, Components
- 35. System Schematics, Blueprints
- 36. Applications
- 37. Detailed System Costs
- 38. Detailed System Performance

Research

- 41. State of the Art
- 42. Materials Research
- 43. Simulations, Models
- 44. Patents
- 45. R&D Progress
- 46. Testing and Measurement
- 47. R&D Contracts

Design and Analysis

- 51. Design Techniques
- 52. Installation Techniques
- 53. Site Selection and Orientation
- 54. Standards, Specifications, Certification
- 55. Computer Models

Financial

- 61. Government Tax Credits, Grants, Incentives
- 62. Financing
- 63. Investments

Commercial

- 71. Manufacturing Processes
- 72. Marketing

Publications

- 74. Bibliographies
- 75. Conference Proceedings
- 76. Newsletters
- 77. R&D Journals
- 78. Teaching Material, Audiovisuals

Other

- 81. Government Programs, Policy
- 82. Expected Major Developments During Next 10 Years
- 83. International Programs
- 84. Social, Environmental, Legal, and Institutional Aspects
- 86. Community Applications and Planning
- 87. Utility Interfaces
- 88. Statistics
- 89. Employment, Jobs
- 98. Other (please specify) _____

4. What is your PRIMARY professional role or area of involvement as a user of solar information?

Please select the code from the list below that **best** describes your principal role, and enter that number in this box

Optional: if there is another, substantially different, **major** role which also applies to you, please enter the code in this box

List of Roles or Areas of Involvement of PROFESSIONAL Solar Information Users (Table for Question 4 Only):

Solar Research, Development, or Analysis Roles

- 21 DOE-funded Researcher (basic or applied)
- 22 Other Federally-funded Researcher
- 23 Other Researcher, Inventor
- 24 Analyst, Consultant

Solar Technical Roles

- 31 Manufacturer of Biomass harvesting equipment
- 32 Farmer, Forest Owner, or other Producer, Collector of Biomass
- 33 Converter of Biomass feedstock to fuel
- 34 Manufacturer of solar or solar-related products
- 35 Architect
- 36 System Designer or Engineer
- 37 Builder, Developer, General Contractor
- 38 Other Professional involved in construction of solar facility or system
- 39 Installer of solar system

Regulatory-Related Areas

- 40 Distributor or Retailer of solar products
- 41 Worker involved with solar construction or maintenance
- 51 Building or Zoning Regulations
- 52 Product Standards and Testing
- 53 Other Regulatory Agency, excluding utility-related (see 59)

Government-Related Areas

- 54 Legislator, staff
- 55 State or Federal Agency responsible for initiating solar R&D or commercialization
- 56 Local, State or Federal Agency considering use of solar systems in agency facilities
- 57 State, Regional, or Federal Agency otherwise affected by solar
- 58 Local Government, Tax Assessor, Municipal Planner, etc.

Other Solar-Related Areas

- 59 Utility or Utility-Related, including Regulatory Agency
- 61 Legal Community
- 62 Realtor, Appraiser
- 63 Insurance Community
- 64 Labor Union
- 65 Private Association, Trade Group, Lobbyist, etc., involved with solar
- 66 Education
- 67 Library, Information Services, Bookstore, Book or Film Distributor, etc.
- 68 Media, Publisher, Writer, etc.
- 69 Extension Service
- 70 Banker, Lending Institution
- 71 Investor, Venture Capital Group
- 98 Other _____

U.S. Department of Energy Report Collection Centers

The reports listed in this catalog are available on microfiche in the following libraries.

- Alabama
Auburn University
Auburn University—Montgomery
University of Alabama
- Arizona
Department of Lib. and Archives—Phoenix
University of Arizona
- Arkansas
Arkansas State Library
University of Arkansas
- California
California State Library—Sacramento
Claremont College
Los Angeles Public Library
San Diego State University
San Francisco Public Library
University of California—Berkeley
University of California—Davis
University of California—San Diego
University of California—Santa Barbara
- Colorado
Colorado State University
Denver Public Library
University of Colorado
- Connecticut
Connecticut State Library
University of Connecticut
- District of Columbia
Library of Congress
- Florida
Broward County Main Library
Florida State University
University of Florida
- Georgia
Georgia Institute of Technology
Medical College of Georgia
University of Georgia
- Hawaii
University of Hawaii
- Idaho
University of Idaho
- Illinois
Illinois State Library
Southern Illinois University
University of Chicago
University of Illinois
Western Illinois University
- Indiana
Indiana State Library
Purdue University
University of Notre Dame
- Iowa
University of Iowa
- Kansas
Kansas State University
University of Kansas
- Kentucky
University of Kentucky
- Louisiana
Louisiana State University
Louisiana Tech University
McNeese State University
University of New Orleans
- Maine
University of Maine
- Maryland
University of Maryland
- Massachusetts
Boston Public Library
Harvard University
University of Massachusetts
- Michigan
Detroit Public Library
Michigan State Library
University of Michigan
Western Michigan University
- Minnesota
University of Minnesota
- Mississippi
University of Mississippi
University of Southern Mississippi
- Missouri
University of Missouri
- Montana
Montana State Library
Montana State University
University of Montana
- Nebraska
University of Nebraska
- Nevada
University of Nevada
- New Hampshire
University of New Hampshire
- New Jersey
Newark Public Library
Rutgers University
Princeton University
- New Mexico
New Mexico State Library
University of New Mexico
- New York
Columbia University
Cornell University
Long Island University
New York State Library
State University of New York—Buffalo
Syracuse University
University of Rochester
- North Carolina
East Carolina University
North Carolina State Library
University of North Carolina
- North Dakota
University of North Dakota
- Ohio
Cleveland Public Library
Ohio State Library
Ohio University
University of Cincinnati
- Oklahoma
Oklahoma Department of Libraries
Oklahoma State University
University of Oklahoma
University of Tulsa
- Oregon
Portland State University
- Pennsylvania
Bucknell University
Lehigh University
State Library of Pennsylvania
- South Carolina
Clemson University
University of South Carolina
- South Dakota
South Dakota School of Mines
- Tennessee
University of Tennessee
- Texas
North Texas State University
Rice University
Southern Methodist University
Texas A&M University
Texas State Library
Texas Tech University
University of Houston
University of Texas—Arlington
University of Texas—San Antonio
- Utah
University of Utah
Utah State University
- Vermont
University of Vermont
- Virginia
University of Virginia
Virginia Polytechnic Institute
- Washington
Eastern Washington University
University of Washington
Washington State Library
Washington State University
Western Washington University
- West Virginia
West Virginia University
- Wisconsin
Public Library of Milwaukee
State Historical Society Library
University of Wisconsin
- Wyoming
Wyoming State Library

MAIL ORDER TO:

NTIS[®]

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
Springfield, VA 22161

NTIS ORDER FORM

Date _____ **For DTIC Users Only** EXPRESS/RUSH (800) 336-4700
 DTIC User Code _____ (703) 487-4700
 Contract Number _____ (last 6 characters only) REGULAR SERVICE (703) 487-4650
 TELECOPIER (703) 321-8547
 TELEX 89-9405

PURCHASER:

BILLING OFFICE TELEPHONE: () _____

SHIP TO: (Enter ONLY if different from address at left)

ATTENTION: _____

ATTENTION: _____

(Last Name) (Initial)

(Last Name) (Initial)

(Company, University, Agency)

(Company, University, Agency)

(Bldg, Suite, Dept)

(Bldg, Suite, Dept)

(Street, P O Box)

(Street, P O Box)

U.S. _____
(City) (State) (Zip)

U.S. _____
(City) (State) (Zip)

Foreign: _____
(City, State or Province, Country)

Foreign: _____
(City, State or Province, Country)

ORDERING OPTIONS: All Regular demand orders are shipped First Class Mail or equivalent service to all U.S. addresses. (For First Class Mail or equivalent service to Canadian and Mexican addresses add \$3 per item; for all other addresses add \$6 per item.) You may also elect Express or Rush Service. For a \$20 per item charge your Express order will be processed within 24 hours and delivered by overnight courier. For a \$10 per item charge your Rush order will be processed within 24 hours and mailed First Class Mail (or equivalent) or you may pick up your Rush order at NTIS within 24 hours for a \$7.50 per item charge. *A Shipping and Handling fee must be applied to all Regular orders, but does not apply to Express, Rush or subscription orders.

USE THIS SECTION ONLY IF YOU KNOW THE DOCUMENT NUMBER. IF YOU ARE ORDERING BY TITLE, TURN THE PAGE.

NTIS ORDER NUMBER	USER ROUTING CODE (See Reverse)	QUANTITY			UNIT PRICE	PRIORITY MAIL SERVICES	TOTAL PRICE
		Paper Copy	Micro-fiche	Other (specify)			
1.							
2.							
3.							
4.							
5.							
6.							

Shipping and Handling Fee (\$3 domestic/\$4 foreign)

METHOD OF PAYMENT

Charge to NTIS Deposit Account No. _____
 Check/money order enclosed for \$ _____
 Billing Charge (see reverse for restrictions and explanation)
 Employer identification number: _____ (9 digits)

Purchase Order No. _____

Charge to my American Express VISA MasterCard

Account No. _____ Expiration Date _____

Signature: _____
(Required to validate ALL orders)

Grand Total \$ _____

USE MEDIA CODES

The two or three letters at the end of NTIS Order Numbers have been placed there to help NTIS marketers determine the most effective media in bringing various types of information to users' attention. **Please use the media codes when ordering.** The information they provide is very helpful to NTIS and to its user community.

USER ROUTING CODE: NTIS can label each item for routing within your organization. If you want this service put your routing code in the box marked USER ROUTING CODE (Limit eight characters).

BILLING SERVICE: This service is restricted to North American business locations for an extra \$7.50 per order (or per Custom Search). The business employer identification number plus the phone number of the office paying the bill are required to process these requests. A late payment charge will be applied to all billings more than 30 days overdue.

FOR TELEPHONE ORDERS, CALL THE NTIS SALES DESK — 703/487-4650.

ORDERING MAGNETIC TAPE: (check mode)

9 Track 800 bpi 1600 bpi 6250 bpi (odd parity)

ORDERING BY TITLE: Use this section if you do not know the document number, but you do know the title. Please give us as much information as you can to help us to fill your order correctly.

TITLE #1 Turn to the other side. Please write "1" in the NTIS Order Number block and complete the rest of the line.		
Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location.)		Personal Author

TITLE #2 Turn to the other side. Please write "2" in the NTIS Order Number block and complete the rest of the line.		
Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location.)		Personal Author

TITLE #3 Turn to the other side. Please write "3" in the NTIS Order Number block and complete the rest of the line.		
Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location.)		Personal Author

TITLE #4 Turn to the other side. Please write "4" in the NTIS Order Number block and complete the rest of the line.		
Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location.)		Personal Author

TITLE #5 Turn to the other side. Please write "5" in the NTIS Order Number block and complete the rest of the line.		
Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location.)		Personal Author



National Renewable
Energy Laboratory



02LIB059536

Solar Energy Research Institute
1617 Cole Boulevard
Golden, Colorado 80401-3393

Bulk Rate
U.S. Postage
PAID
Permit No. 258
Golden, Colorado

A Product of the
Solar Technical Information Program



Solar Energy Research Institute

Operated for the
U.S. Department of Energy
by Midwest Research Institute

September 1987
SERI/SP-272-3201