

CURRICULUM VITAE

Richard J. Komp, President, SunWatt Corporation

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EDUCATION:

PhD. Physical Chemistry, Physics minor, Wayne State University, Detroit, Michigan, 1964. Dissertation: "Photoelectric Emission from Single Crystal Cuprous Oxide."

BS. Chemistry, Physics and Math. minors, Loras College, Dubuque, Iowa, 1960. Thesis: "The Chromatographic Separation of Cis-Trans Isomers of Substituted Styrenes."

PERSONAL: Born August 7, 1938, Chicago, Illinois

PROFESSIONAL EXPERIENCE:

1997 to present: Visiting Professor in Electrical Engineering, Universidad Nacional de Ingenieria, Managua, Nicaragua. Teaching post-graduate courses in solar and renewable energy, supervising student thesis projects in Electrical and Mechanical Engineering, Chemistry and Architecture Departments. Advising Grupo Fenix (non-profit renewable energy organization). Organized Suni Corp. to manufacture pv systems.

1991, 1997: Adjunct professor, College of the Atlantic, Teaching courses on Soft Energy Paths.

1981 to present: Vice President for Research and Development (President, 1988) of SunWatt Corporation, a photovoltaic manufacturer. Responsible for creation of new product lines and manufacturing processes. Developed concentrating Photovoltaic/thermal hybrid modules and inexpensive small battery chargers.

1979 to present, Executive Director of Skyheat Associates, a non-profit public organization whose purpose is to conduct research and promote the use of solar energy and other renewable technologies. Developed and organized a set of one and two day solar workshops. Skyheat oversees the US activities of the Grupo Fenix in Nicaragua.

1975 to 1981: Research Associate, Dept. of Chemistry, Wayne State University, Detroit, Michigan. Research on oxide solar cells under DoE sponsorship. Investigated heterojunctions and Schottky barrier junctions on thin semiconductor films. Developed new fabrication methods for photovoltaic cells using electroplating and chemical vapor deposition

1973 to 1975: Vice President, Zip Services div. of Educational Activities, Inc., Columbus, Ohio. Responsible for technical development and copier programs. Initiated construction of solar research facility in southern Indiana.

1968 to 1972: Associate Professor, Dept. of Physics and Astronomy, Western Kentucky University, Bowling Green, Ky. Full time teaching duties in physics and astronomy at both the undergraduate and graduate level. Undertook research on cuprous oxide and organic dye semiconductor solar cells and on phase change heat storage systems. Designed and constructed a prototype passive solar house. Member of the graduate faculty.

1964 to 1968: Senior Physicist, Xerox Corporation, Materials Research Laboratories, Webster, New York. Fundamental research on the band structure of amorphous and organic semiconductors and on the mechanism of dye photosensitization of selenium and zinc oxide; and applied work developing new imaging systems and color copiers.

PROFESSIONAL MEMBERSHIPS:

The International Solar Energy Society, The American Association for the Advancement of Science, Sigma Xi, Maine Solar Energy Association (President), SeedTree (Treasurer), Northeast Sustainable Energy Association (Chapter Board Member), Great Auk Land Trust (Board Member)

BOOKS AND PERIODICALS:

PRACTICAL PHOTOVOLTAICS, Richard J. Komp, aatec Publications Ann Arbor, Mich. 1981 (Revised Edition 1984, Third Edition 1995, Revised 3rd Edition 2002)

THE SOLAR ELECTRIC HOME, Joel Davidson & Richard Komp, aatec Publications, Ann Arbor, 1983

Editor, MAINE SUN, Quarterly newsletter of the Maine Solar Energy Association, 1995 to present.

CURSO SOLAR TERMICO FOTOVOLTAICO, Richard Komp, UNI, Managua, Nicaragua 2005

SEMINARS AND WORKSHOPS

Photovoltaic Hands-on Workshops: Northeast Sustainable Energy Association, Greenfield MA, 2001; Green Party Local Group, Tracy California 2003. East Cape Tecnikon, East London South Africa, 2001. Plus many others. Photovoltaic Module Assembly Workshops: Grupo Fenix, Managua Nicaragua, 1996-Present; Rural Development Technology Exposition, Bulawayo, Zimbabwe, 1982; Solar Short Course, Bronx Community College, 2002-2003. Many similar workshops given worldwide over a 22 year period. Solar Microdrip Irrigation workshop: Ten day to one month technical seminars for engineers and professionals, Honduras, Haiti, Nicaragua, 2002- Present., Solar courses, Mali, West Africa, 2005-2006, France, May 2007, India October-December 2007

SELECTED SCIENTIFIC PUBLICATIONS:

"The Effect of Ion Bombardment on the Photoelectric Threshold of Single Crystal Cuprous Oxide", Richard J. Komp and Dan Trivich, JOURNAL OF THE ELECTROCHEMICAL SOCIETY, Vol. 112, pp. 702-706, (1966)

"Electronic Energy States of Certain Sensitizers and Dielectrics", Richard J. Komp and Thomas J. Fitzsimmons, PHOTOCHEMISTRY AND PHOTOBIOLOGY, Vol. 8, pp. 419-427 (1968)

"The Ionization Potential and Electron Affinity of Amorphous Sulphur", Richard J. Komp and Thomas Fitzsimmons, Proceedings, S.E. Section Meeting, APS (1968)

"Thermionic Space Charge Oscillations", William L Carl & Richard J. Komp, Proceedings, Section Meeting, APS (1972)

"The Open Lab in Introductory Astronomy", R.L. Hackney, P.B. Campbell, R.J. Komp, N.F. Six and A.S. Wawruckiewicz, Proceedings, S.E. Section Meeting, APS (1972)

"Cuprous Oxide Schottky Barrier Photovoltaic Cells", D. Trivich, E.W. Wang, R.J. Komp, and F. Ho, 12th IEEE PHOTOVOLTAIC SPECIALISTS CONFERENCE PROCEEDINGS, pp. 875-881 (1976)

"Photovoltaic Cells of Electrodeposited Cuprous Oxide", N.A. Economu, R.S. Toth, R.J. Komp and D. Trivich, PROCEEDINGS OF 1977 PHOTOVOLTAIC SOLAR ENERGY CONFERENCE, Luxembourg, pp. 1180-1185 (1977)

"Cuprous Oxide as a Photovoltaic Converter", C. Nouguet, M. Tapiero, C. Schwab, J.P. Zielinger, D. Trivich, R. Komp, E.Y. Wang and K. Weng, PROCEEDINGS OF 1977 PHOTOVOLTAIC SOLAR ENERGY CONFERENCE, Luxembourg, pp. 1170-1179 (1977)

"Cuprous Oxide MIS Solar Cells", D. Trivich, E.Y. Wang, R.J. Komp and T.F. Huang, 14th IEEE PHOTOVOLTAIC SPECIALISTS CONFERENCE PROCEEDINGS, pp. 458-461 (1980)

"The Self Sufficient Home: Combining a Wind Generator and a Photovoltaic Array as Power Sources for a Remote Dwelling", Richard J. Komp, ALTERNATIVE ENERGY IN THE MIDWEST, VOL I, pp. 6-41 to 6-48 (1985)

"Field Experience and Performance Evaluation of a Novel Photovoltaic- Thermal Hybrid Solar Energy Collector", R.J. Komp, INTERSOL 85, Vol. 3, pp. 1748-1752 (1985)

"Solar Battery Chargers", Richard J. Komp, PHOTOVOLTAICS INTERNATIONAL, Vol IV, No. 8, p.11 (Nov. 1986)

"Photovoltaics in Nicaragua" HOME POWER, Issue #61, pp 36-38, October/November 1997.

"Solar Home with a View" (with Burke Miller) SOLAR TODAY, Vol 11, No. 3, May/June 1997. Incorporated as Chapter 1 of: BUILDINGS FOR A SUSTAINABLE AMERICA, American Solar Energy Society Boulder, Colorado, 1998

"The Photovoltaic Still: Desalinate Sea Water and Make Electricity at the Same Time", Richard J. Komp, Susan Kinne and Douglas Garcia, SOLAR 2000 CONFERENCE PROCEEDINGS, American Solar Energy Society, June 2000

"A Catalyst for Growth - Nicaragua", Richard J. Komp, Susan Kinne, REFOCUS, THE INTERNATIONAL RENEWABLE ENERGY MAGAZINE, Pages 33-35 ,Jan/Feb 2001

"Off-Grid Photovoltaic Rural Electrification in Northern Nicaragua by the Grupo Fenix", Richard Komp, Susan Kinne, Maria Teresa Castillo, Peter Sundberg, José Luis Vilches and Alexis José Martinez, 2nd INTERNATIONAL CONFERENCE ON RURAL ELECTRIFICATION, Havana, Cuba, May 2003

"Photovoltaics as a Cottage Industry" Richard Komp, Carolina Barreto 1st SUSTAINABLE RESOURCES CONFERENCE, Univ. of Colorado, Boulder CO, October 2004

"Solar Powered Microdrip Irrigation in Nicaragua and Haiti Using Locally Built Photovoltaic Modules" Richard J. Komp, Susan Kinne, Carolina Barreto, WORLD SOLAR CONGRESS PROCEEDINGS, International Solar Energy Society, August 2005.

"Solar Autoclaves for Sterilizing Medical Instruments in Remote Health Clinics" Richard Komp, Alexis Martinez Onell Morales, WORLD SOLAR CONGRESS PROCEEDINGS, International Solar Energy Society, August 2005

"Introducing Solar Electricity and Solar Cookers into Rural Villages in the Developing World" Richard Komp and Eleneth Lara, 2nd SUSTAINABLE RESOURCES CONFERENCE, Univ. of Colorado, Boulder CO, October 2005

"Creating a Solar Culture in Nicaragua via a University-Community Knowledge Cycle" Susan Kinne, Cody Reed, Richard Komp, ICREDDC Conference, Washington DC, April 2006

“Solar Roasted Coffee – an Example of Academic- Community Collaboration in Nicaragua” Richard Komp, Susan Kinne, Adelina Sanchez Cordero, SOLAR 2006 CONFERENCE PROCEEDINGS, American Solar Energy Society, July 2006

"Vacuum-free, cost-effective, developing-country-material available solar cell encapsulation" Frédéric Dross, Ariane Labat, Mauro Antonio Perez Lopez, Marco Antonio Perez Lopez, Rudolfo Raudez, Anna Bruce, Susan Kinne, Richard Komp SOLAR ENERGY MATERIALS AND SOLAR CELLS, Elsevier Vol. 90, Iss. 14, 2006, pp 2159-2166

“Capillarity Solar Cell Encapsulation: A New Vacuum-free, Cost-effective Encapsulation Technique Compatible with Very Thin String Ribbons” F. Dross, Marco A. Perez Lopez, Mauro A. Perez Lopez, A. Smith, D. Elis, A. Labat, R. Raudez, A. Bruce, S. Kinne, R. Komp, 21st EUROPEAN PHOTOVOLTAIC SOLAR ENERGY CONFERENCE, Dresden, Germany, September 2006.

“Creating Jobs for Women in Rural Nicaragua through Grupo Fenix Participatory Solar Energy Projects” Susan Kinne, Richard Komp, Catherine Borrowman, SOLAR 2007 CONFERENCE PROCEEDINGS, American Solar Energy Society, July 2007