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Director, Clean Energy Research Center
 Professor, Electrical Engineering Department
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EDUCATION

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|-------|--|--------------------------|
| Ph.D. | Washington State University, Pullman, Washington, 1969
<i>"Kinetic Studies of Positive Ions Emitted from Heated Iron Filaments"</i> | (Engineering Science) |
| M.S. | Washington State University, Pullman, Washington, 1965
<i>"Electric Field and Hall Voltage in a Magnetically Non-Linear Metallic Conductor"</i> | (Electrical Engineering) |
| B.S. | Washington State University, Pullman, Washington, 1964 | (Electrical Engineering) |

EMPLOYMENT

1998-Present

Professor and Director, Clean Energy Research Center, College of Engineering, Electrical Engineering Department, University of South Florida. Research and development related to renewable energy sources and systems such as, concentrated solar power systems, hydrogen production, photovoltaic energy, solar charging stations, battery testing.

11/87- 8/03

Professor and Chairman, Department of Electrical Engineering, University of South Florida. Managed a department of up to 28 faculty members and 500 students (B.S., M.S., Ph.D.) and a budget of ~\$4 million.

8/85 - 11/87

Professor, Department of Electrical Engineering, University of South Florida. Taught graduate and undergraduate courses, carried out research in the areas of solar power and electric vehicles.

6/77 - 8/85

Professor, Electrical Engineering North Carolina A&T State University, Greensboro, N.C. Taught undergraduate and graduate courses in the areas of semiconductor theory and devices, solid state energy conversion and solar energy.

8/78 - 8/83	Graduate Coordinator
8/81 - 7/85	CITR Representative

8/79 - 8/85

Research Director, Rockwell Solid State Electronics Laboratory. Directed research activities in the Rockwell Solid State Electronics Lab which contained facilities for the growth and fabrication of electronic and optoelectronic devices (including solar cells) made of iii-v semiconductor compounds. Four professors and ten graduate students were normally involved in RSSEL activities.

6/77 - 8/85

Microelectronics Center of North Carolina. Served as the technical representative of North Carolina A&T State University to the Microelectronics Center of North Carolina (MCNC). Coordinated activities at NC A&T for the development of computer-aided design, integrated circuit silicon fabrication and communication (teleconference, tele-classroom) facilities.

9/68 - 5/77

University of Idaho, Moscow, Idaho

9/72 - 5/77	Associate Professor, Electrical Engineering Department.
1/69 - 8/72	Assistant Professor, Electrical Engineering Department.
9/68 - 12/68	Adj. Assistant Professor, Electrical Engineering Department

Responsibilities: Developed a solid state electronics laboratory for the growth of iii-v semiconductor compounds by current controlled liquid phase epitaxy. Developed courses in the direct energy conversion, solid state materials and electromagnetic field areas. Advised graduate and undergraduate students.

9/64 - 9/69

Washington State University, Pullman, Washington

Summer 1969	Research Associate, Physics
7/66 - 12/68	Research Assistant, Electrical Engineering and Metallurgy
9/64 - 6/66	Teaching assistant, Electrical Engineering

Responsibilities: Carried out research on surface and bulk properties of metals by means of electron and positive ion emission in ultra-high vacuum environments. Assisted in the teaching of electronics laboratory courses.

PATENTS (Total: 19)

1. Ram, M.K., Stefanakos, E.K., and Goswami, D.Y. (2017) "Low Cost Chromatic Devices" US Patent 9,684,218 (June 20, 2017).

2. Goswami, D.Y., Chen, H., Stefanakos, E.K. (2016) "Method and System For Generating Power From Low- and Mid-Temperature Heat Sources" US Patent number 9,376,937 (June 28, 2016)
3. Ram, M.K., Indrakar, S., Goswami, D.Y., and Stefanakos, E.K. (2016) "Conducting polymer composite touch-chromism in salt-based electrolyte," [Provisional patent application, August 2016.]
4. Ram, M.J., Stefanakos, E.K., and Goswami, D.Y., (2016) "Method of Encapsulating a Phase Change Material with a Metal Oxide," US Patent 9,493,695, November 15, 2016.
5. Ram, M.J., Stefanakos, E.K., and Goswami, D.Y., (2016) "Composite Conductive Polymer Films" US Utility Patent application: 15/161,541. (May 23, 2016).
6. Ram, M.K., Mishra, S., Stefanakos, E.K., and Goswami, D.Y. (2016) "Conductive Polymer Composite Electrodes for High Specific Capacitance and Methods of Making Thereof," US Patent application: 62/356,320. (June 29, 2016).
7. Dhau, J., Goswami, D., Jotshi, C.K., and E.K. Stefanakos (2015) "Encapsulation of thermal energy storage media," US Patent Application Publication Number: US 2015/0284616 A1 (October 2015)
8. Ram, M.K., Goswami, D.Y., and Stefanakos, E.K. (2015) "Metal Sensitized Color Changing Material", US Patent Application Publication Number: US 2015 20160109776 (October 2015)
9. Ram, M.K., Mishra, S., Stefanakos, E.K., and Goswami, D.Y. (2015) "Conducting films and methods for forming them", US Patent Application Number: US 14/919971.
10. Ram, M.K., Stefanakos, E.K., Goswami, D.Y. (2015) "Low-cost chromatic devices," US Patent Application Publication Number: US 2015/0234248 A1 (August, 2015)
11. Ram, M.K., Jotshi, C.K., Stefanakos, E.K., and Goswami, D.Y. (2014) "Method of encapsulating a phase change material with a metal oxide," US Patent application publication number: US 2014/20140197355 (January 2014).
12. Srinivasan, S., Niemann, M.U., Goswami, D.Y., and Stefanakos, E.K. (2013) "Method of Generating Hydrogen-Storing Hydride Complexes", US Patent number 8,440,100 (May 14, 2013).
13. Srinivasan, S., Jurczyk, N., Goswami, D. Y., Stefanakos, E.K., (2012) "Methods and Processes for Producing Complex Hydrides Exhibiting High Hydrogen Storage Capacity and Fast Sorption Kinetics at Moderate Temperatures", US Patent Number 8,153,020, April, 2012
14. Stefanakos, E.K., Goswami, Y., and Bhansali, S. (2012) "Rectenna Solar Energy Harvester," US Patent Number 8,115,683 B1, February 2012.

15. Goswami, D.Y., Lee, M.S., Kothurkar, N.K., and Stefanakos, E.K. (2011) "Practical method of CO₂ Sequestration," US Patent Number 7,896,953 B1, March 1, 2011.
16. Sarehraz, M., Buckle, K., Stefanakos, E., Weller, T., and Goswami, D.Y., (2009) "Dual-Polarized Feed Antenna Apparatus and Method of Use" US Patent 7,619,570 B1, November 17, 2009.
17. Sarehraz, M., Buckle, K., Stefanakos, E., Weller, T., and Goswami, Y. (2009) "High Frequency Feed Structure Antenna Apparatus and Method of Use" US Patent Number 7,486,236, February 3, 2009.
18. Stefanakos, E., Wiley, P., and Ioannou, S. (2009) "MOV Failure Identification", US Patent 7,593,209 B2, September 2, 2009.
19. Sarehraz, M., Buckle, K., Stefanakos, E., Weller, T., and Goswami, D.Y. (2008) "Dual-Polarized Feed Antenna Apparatus and Method of Use" US Patent 7,362,273 B2, April 22, 2008.
20. Bhansali, S., Buckle, K., Goswami, D.Y., Stefanakos, E., and Weller, T., (2006) "Rectifying Antenna and Method of Manufacture," US Patent Serial No. 7,091,918, B1, August 15, 2006.
21. Wiley, P. Sideris, A., and Stefanakos E. (2000) "On-Line Battery Management and Monitoring System and Method", US Patent Number 6,031,354, February 29, 2000.

PUBLICATIONS

Books

- Sherif, S.A. Goswami, D.Y., and Stefanakos, E.K. (Eds.), (2014) Handbook of Hydrogen Energy, CRC Press/Taylor and Francis Publishers, Boca Raton, FL.
- Goswami, D.Y., Klett, D.E., Raiford, M.T. and Stefanakos, E.K. (1979) Solar Radiation Design Data for North Carolina, N. C. Department of Commerce, Raleigh, NC.

Proceedings Published as Books

- Stefanakos, E.K. (1980) (Editor) Proceedings, "Energy Alternatives for Greece," Krikos Publications, New York, 243 Pages, October.
- Stefanakos, E.K. (1978) (Editor) Symposium on "Emerging Energy Alternatives for the Southeastern States" NASA Conference Publication 2042, 146 Pages, March.

Book Chapters (7)

1. Almatrafi, E., Abutayeh, M., Li, C., Goswami, D.Y., and Stefanakos, E.K. (in press) "Solar Desalination," Chapter XX, pages: XX in Desalination: Water from Water (Ed. Jane Kucera), Scrivener/John Wiley Publishing, MA.
2. Basnayaka, P.A. Ram, Manoj K Stefanakos, E.K. Kumar, A. (2015) Nanostructured Hybrid Graphene-Conducting Polymers for Electrochemical Supercapacitor Electrodes, Handbook of Nanoelectrochemistry, Springer International Publishing Switzerland, 2015, pp. 479-501.
3. Abutayeh, M., Li, C., Goswami, D.Y., and Stefanakos, E. (2014) "Solar Desalination," Chapter 13 in Desalination: Water from Water (Ed. Jane Kucera), Scrivener/John Wiley Publishing, MA.
4. Srinivasan, S.S., Sharma, P.C., Stefanakos, E.K., and Goswami, D.Y. (2014) "Metal Hydrides" Ch. 20, in Handbook of Hydrogen Energy, CRC Press/Taylor and Francis Publishers, Boca Raton, FL.
5. Srinivasan, S.S., Sharma, P.C., Stefanakos, E.K., and Goswami, D.Y. (2014) "Complex Hydrides" Ch. 21, in Handbook of Hydrogen Energy, CRC Press/Taylor and Francis Publishers, Boca Raton, FL.
6. Srinivasan, S.S., Sharma, P.C., Stefanakos, E.K., and Goswami, D.Y. (2014) "Nanomaterials for Hydrogen Storage Hydrides" Ch. 22, in Handbook of Hydrogen Energy, CRC Press/Taylor and Francis Publishers, Boca Raton, FL.
7. Basnayaka, P.A., Ram, M.K., Stefanakos, L., and Kumar, A. (2013) "Nanostructured hybrid graphene-conducting polymers for electrochemical supercapacitor electrodes," *Electrochemistry*, Springer.
8. Stefanakos, E., Goswami, D.Y., Srinivasan, S. and Wolan, J. (2008) "Hydrogen Energy," Chapter in *Environmentally Conscious Alternative Energy Production*, (M. Kutz, editor), pp. 165-206. John Wiley & Sons, publisher.

Editorial

- Stefanakos, E.K. (2014-Present) Editor-in-Chief, *Journal of Power and Energy Engineering*, Scientific Research Publishing. SCIRP: <http://www.scirp.org>
- Stefanakos, E. (2014-Present) Editorial Board Member, *The Scientific World Journal*, Hindawi Publishing Corp.
- Stefanakos, E. (2004-Present) Associate Editor (for Photovoltaics), for the ISES technical journal of *Solar Energy*.
- Stefanakos, E. (2011-Present) Editor, *Society for Science and Technology*, Union Press, Osaka
- Stefanakos, E. (2011-Present) Editorial Board, *Journal of Natural and Development resources*
- Stefanakos, E. (2000-Present) Co-Editor (USA), *Journal of Asian Electric Vehicles*

- Delyannis, E. and Stefanakos, E. (2003). (Guest Editors). Special Issue on “Solar Desalination”, ISES technical journal *Solar Energy*, Volume 75, Number 5, pp.355-438,

Referee, Reviewer

- National Science Foundation
- U.S. Army Research Office
- Greek Ministry for Education
- Italian Ministry for University and Research
- *Journal of Applied Physics*
- *IEEE Transactions on Magnetics*
- *Journal of Vacuum Science And Technology*
- *Journal of Crystal Growth, International EV Symposium*
- *Journal of Solar Energy*
- *Micro and Nano Letters*
- *International Journal of Hydrogen Energy*

KEYNOTE ADDRESSES

1. Stefanakos, E. K. (2013), “Solar Power for Global Energy Needs”, ISES Solar World Congress, November, Cancun, Mexico.
2. Stefanakos, E. K. (2013), “Solar Power for Global Energy Needs”, Clean Energy Sustainability Conference, USF/Sarasota-Manatee, November, Sarasota, FL.
3. Stefanakos, E. K. (2012), “Solar Power for Global Energy Needs”, Anhui Renewable Energy Industry Forum, September 23-27, Anhui Province China.
4. Stefanakos, E. K. (2012), “Solar Energy and Energy Storage”, City University of Hong Kong, September 28, Hong Kong, China.
5. Stefanakos, E. K. (2012), “Solar Power Plants and Energy Storage for Global Energy Needs”, IFNA World Congress - Energy, Athens, Greece, June 25-July 1, 2012
6. Stefanakos, E.K. (2009), “Alternative Energy: How Can it be Introduced and Extended In Aerospace and Defense Manufacturing”, *Marcus Evans Aerospace & Defense Manufacturing Summit*, Jacksonville, Florida, February, 8-11.

TECHNICAL REPORTS & INVITED PRESENTATIONS

More than 300 Technical Reports and Invited Presentations at Meetings and Organizations have been completed.

REFEREED JOURNAL PUBLICATIONS (*Journals 144; Conf. Proc's: 151; Total 294*)

1. Srinivasan, S.S., Demirocak, D.E., Goswami, Y., and Stefanakos, E. (2017) "Investigation of catalytic effects and compositional variations in desorption characteristics of LiNh_2H_2 -nano MgH_2 " MDPI, *Applied Sciences*, 2017, 7, 701: doi: 10.3390/app7070701
2. Zeyghami, M., Stefanakos, E., and Goswami, D.Y. (2017) "Development of one-dimensional photonic selective emitters for energy harvesting applications," *Solar Energy Materials and Solar Cells*, 163, pp, 191-198.
3. Abdelmola, F.M. Ram, M.K., Takshi, A., Stefanakos, E.K., Kumar, A., and Goswami, D.Y. (2016) "Photoelectrochemical cell of hybrid regioregular poly (3-hexylthiophen, 2, 5, diyl) and molybdenum disulfide film," *Surface Review and Letters*, DOI (2016).
4. Archibold, A.R., Bhardwaj, A., Rahman, M.M., Goswami, D.Y., and Stefanakos, E.L. (2016) "Comparison of numerical and experimental assessment of a latent heat energy storage module for a high-temperature phase-change materials," *Journal of Energy Researches Technology*, Vol. 138, September.
5. Azad, I., Ram, M.K., Goswami, D.Y., and Stefanakos, E.K. (2016) "Fabrication and characterization of ZnO Langmuir-Blodgett films and its use in metal-insulator-metal tunnel diode," *Langmuir*, July, DOI: 10.1021/acs.langmuir.6b02182
6. Mueller, A., Orosz, M., Narasiman, A.K., Kamal, R., Hemond, H.F., and Goswami, Y. (2016) "Evolution and feasibility of decentralized concentrating solar thermal power systems for modern energy access in rural areas," *MRS Energy and Sustainability: A Review Journal*, doi:10.1557/mre.2016.4; pp. 1-32.
7. Myers, P.D., Alam, T.E., Kamal, R., Goswami, D.Y, and Stefanakos E. (2016) "Nitrate salts doped with CuO nanoparticles for thermal energy storage with improved heat transfer" *Applied Energy*, 165, pp. 225-233.
8. Ram, M.K., Goswami, D.Y., Takshi, A., and Stefanakos, E. (2016) A new chromic (TouchChromic) thin film. *Acta Materialia*, 121, pp. 326-330.
[Video available at: <http://www.sciencedirect.com/science/article/pii/S1359645416307078>]
9. Ram, M.K., Myers, P.D., J.D., Goswami, D.Y., Stefanakos, E.K., Arvanitis, K.D., Papanicolaou, E., and Belessiotis, V. (2016) "Microencapsulated dimethyl terephthalate phase change material for heat transfer fluid performance enhancement," *International Journal of Energy Research*, DOI: 10.1002/34.3615.
10. Ram, M.K., Myers, P.D., Jotshi, C., Goswami, D.Y., Stefanakos, E.K., Arvanitis, K., Belesiotis, V., and Papanikolaou, E., (2016) "Microencapsulated dimethyl terephthalate phase change material for heat

transfer fluid performance enhancement," *International Journal of Energy Research*, DOI 10.1002/34.3615 (2016).

11. Alam, T.E., Dhau, J.S., Goswami, D.Y., and Stefanakos, E.K. (2015) "Macroencapsulation and characterization of phase change materials for latent heat thermal energy storage systems," *Applied Energy*, 154, pp 92-101
12. Archibold, A.R., Goswami, D.Y., Rahman, M.M., and Stefanakos, E.K. (2015) Multi-mode heat transfer analysis during freezing of an encapsulated storage medium," *International Journal of Heat and Mass Transfer*, 84, pp. 600-609.
13. Archibold, A.R., Rahman, M.M., Goswami, D.Y., and Stefanakos, E.K. (2015) "The effects of radiative heat transfer during the melting process of a high temperature phase change material confined in a spherical shell," *Applied Energy*, 138, pp. 675-684.
14. Bellan, S., Alam, E.E., Gonzalez-Aguilar, J., Romero, M., Rahman, M.M., Goswami, D.Y., and Stefanakos, E.K. (2015) "Numerical and experimental studies on heat transfer characteristics of thermal energy storage system packed with molten salt PCM capsules," *Applied Thermal Engineering*, 90:5, pp. 970-979.
15. Besarati, S.M., Goswami, D.Y., and Stefanakos, E.K. (2015) "Development of a solar receiver based on compact heat exchanger technology for supercritical carbon dioxide power cycles," *ASME Journal of Solar Energy Engineering*, June, Vol. 147, pp. 031018 1-8.
16. Lee, M.S., Goswami, D.Y., Kothurkar, N., and Stefanakos, E.K. (2015) "Development and evaluation of calcium oxide absorbent immobilized on fibrous ceramic fabrics for high temperature carbon dioxide capture," *Powder Technology*, 274, pp. 313-318.
17. Myers, Jr., P.D., Goswami, D.Y., and Stefanakos, E.K. (2015) "Molten salt spectroscopy for quantification of radiative absorption in novel metal chloride-enhanced thermal storage media." *Journal of Solar Energy Engineering. Transactions of the ASME*. Vol. 137, No. 4, August. Article number: 041002.
18. Bellan, S., Gonzalez-Aguilar, Romero, M., Rahman, M.M., Goswami, D.Y., Stefanakos, E.K., and Couling, D. (2014) "Numerical analysis of charging and discharging performance of a thermal energy storage system with encapsulated phase change material," *Applied Thermal Engineering*, (vol. 71, #1, October; pp. 481-500). doi: 10.1016/j.applthermaleng.2014.07.009.

19. Besarati, S.M., Goswami, D.Y., and Stefanakos, E.K. (2014) "Optimal heliostat aiming strategy for uniform distribution of heat flux on the receiver of a solar power tower plant," *Energy Conversion and Management*, 84, pp. 234-243.
20. Celestin, M., Krishnan, S., Bhansali, S., Stefanakos, E., and Goswami, D. Y. (2014) "A review of self-assembled monolayers as potential terahertz frequency tunnel diodes," *Nano Research*, Vol. 7, #5, May, pp. 589-625. (DOI: 10.1007/s12274-014-0429-8, Tsinghua University Press: Springer).
21. Khawaja, M.K., Sharma, S., Ram, M.K., Goswami, D.Y., and Stefanakos, E.K. "Sol-Gel Synthesis of Ruthenium Oxide-Graphene Nanocomposites as Electrode Material for Supercapacitor Applications," *Graphene*, 2 (2014) 117-122.
22. Lee, M.S., Kothukur, N., Goswami, D.Y., and Stefanakos, E.K. (2014) "Development and evaluation of calcium oxide absorbent immobilized on fibrous ceramic fabrics for high temperature carbon dioxide capture", *Powder Technology*.
23. Ramos-Archibold, A., Rahman, M.M., Goswami, D.Y., and Stefanakos, E.K. (2014) "Analysis of heat transfer and fluid flow during melting inside a spherical container for thermal energy storage," *Applied Thermal Engineering*, 64 (1-2), pp. 396-407.
24. Ramos-Archibold, A., Gonzalez-Aguilar, J., Rahman, M.M., Goswami, Y.D., Romero, M., and Stefanakos, E.K. (2014) "The melting process of storage materials with relatively high phase change temperatures in partially filled spherical shells," *Applied Energy*, 116, pp. 243-252.
25. Sharma, S., Khawaja, M., Ram, M.K., Goswami, D.Y., and Stefanakos, E.K. "Characterization of 10, 12-pentacosadiynoic acid Langmuir-Blodgett monolayers and their use in metal-insulator-metal tunnel devices," *Beilstein journal of nanotechnology*, 5 (2014) 2240-2247.
26. Udom, I., Myers, P.D., Ram, J.K., Hepp, A.F., Archibong, E., Stefanakos, E.K., and Goswami, D.Y. (2014) "Optimization of Photocatalytic degradation of phenol using simple photocatalytic reactor," *American Journal of Analytical Chemistry*, 5, 743-750. Online August 2014 in *Scientific Research* <http://www.scrip.org/journal/ajac> <http://dx.doi.org/10.4236/ajac.2014.511083>
27. Udom, I., Zhang, Y., Ram, M.K., Stefanakos, E.K., Elzein, R., Schlaf, R., Hepp, A.F., and Goswami, D.Y. (2014) "A simple photolytic reactor employing Ag-doped ZnO nanowires for water purification," *Thin Solid Films*, 564 (1) pp. 258-263.
28. Abutayeh, M., Goswami, D.Y., and Stefanakos, E.K. (2013) "Solar thermal power plant simulation," *Environmental Progress and Sustainable Energy*, 32 (2), pp. 417-424, doi: 10.1002/ep.11636

29. Abutayeh, M., Goswami, D.Y., and Stefanakos, E.K. (2013) "Theoretical and experimental simulation of passive vacuum solar flash desalination," *ASME Journal of Solar Energy Engineering*, May, 135, pp. 021014-1-021014-13.
30. Basnayaka, P.A., Bain, V.G., Stefanakos, L., Kumar, A., Ram, M.K., and Viswanathan, T. (In Preparation 2013). "A new approach to high-voltage asymmetric type supercapacitors consisting of dual P- and N-co-doped carbon and graphene-polyaniline electrodes."
31. Basnayaka, P.A., Ram, J.K., Stefanakos, L., and Kumar (2013) "Graphene/Polypyrrole nanocomposite as electrochemical supercapacitor electrode: Electrochemical Impedance studies," *Graphene*, vol. 2, no. 2, pp. 81-87.
32. Basnayaka, P.A., Ram, M.K., Stefanakos, L., and Kumar, A. (2013) "High performance graphene-poly (o-anisidine) nanocomposite for supercapacitor applications," *Materials Chemistry and Physics*, vol. 141, no. 1, pp. 263-271, doi: 10.1016/j.matchemphys.2013.05.009.
33. Basnayaka, P.A., Ram, M.K., Stefanakos, L., and Kumar, A. (2013) "Poly (acrylic acid)-Mediated soft template synthesis of Poly(3,4-ethylenedioxythiophene)-based conducting polymer nanostructures for supercapacitor applications," *Materials Research Society (MRS) Proceedings*, vol. 1497.
34. Basnayaka, P.A., Ram, J.K., Stefanakos, L., and Kumar (2013) "Supercapacitors based on grapheme-polyaniline derivative nanocomposite electrode materials," *Electrochimica Acta* [doi:10.1016/j.electacta.2013.01.039], vol. 92, no. 1, pp. 376-382.
35. Basnayaka, P.A., Villalba, P., Ram, M.K., Stefanakos, L. and Kumar, A. (2013) "Photovoltaic properties of multi-wall carbon nanotubes-Poly(3-octathiophene)-conducting polymer blends," *Materials Research Society (MRS) Proceedings*, vol. 1493, pp. 139-144 doi: 10.1557/opl.2013.406.
36. Besarati, S.M., Padilla, R.V., Goswami, D.Y., and Stefanakos, E. (2013) "The potential of harnessing solar radiation in Iran: Generating solar maps and viability study of PV power plants," *Renewable Energy*, 53, May, pp. 193-199.
37. Demirocak, D.E., Ram, M.K., Srinivasan, S.S., Goswami, D.Y., and Stefanakos, E.K. (2013) "A novel nitrogen rich porous aromatic framework for hydrogen and carbon dioxide storage," *Journal of Materials Chemistry A*, 1 (44), 13800-13806.
38. Demirocak, D.E., Srinivasan, S.S., Ram, M.K., Goswami, D.Y., and Stefanakos, E.K. (2013) "Volumetric hydrogen sorption measurements: Uncertainty error analysis and the importance of thermal equilibration time," *International Journal of Hydrogen Energy*, 38, number 3, February, pp. 1469-1477.
39. Demirocak, D.E., Srinivasan, S.S., Ram, M.K., Kuhn, J.N., Muralidharan, R., Li, X., Goswami, D.Y., and Stefanakos, E.K. (2013) "Reversible hydrogen storage in the Li-Mg-N-H system: The effects of Ru doped single walled carbon nanotubes on NH₃ emission and kinetics," *International Journal of*

Hydrogen Energy (available online <http://dx.doi.org/10.1016/j.ijhydene.2013.05.176>) Vol. 38, #24, August, pp. 0039-10049.

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41. Koiry, S.P., Celestin, M.E., Ratnadurai, R., Veerender, P., Majumder, C., Krishnan, S., Stefanakos, E., Goswami, Y., Aswai, D.K., and Bhansali, S. (2013) "Ferroelectric like characteristics in redox active polymer of 5, 10, 15, 20 tetra(4-hydroxyphenyl)-porphyrin at room temperature, *Applied Physics Letters*, 103 (3), 033302, doi: 10.1063/1.4813736.
42. Kuravi, S., Goswami, D.Y., Stefanakos, E.K., Jotshi, C.K., and Trahan, J. (2013) "Investigation of a high temperature packed bed sensible heat thermal energy storage system with large sized elements," *Journal of Solar Energy Engineering*. 135(4), 041008; doi: 10.1115/1.4023969
43. Kuravi, S., Trahan, J., Stefanakos, E., Rahman, M., and Goswami, D.Y., (2013) "Thermal Energy Storage Technologies and Systems for Concentrating Solar Power Plants" *Progress in Energy and Combustion Science*, 39, No. 4, pp. 285-319, March.
44. Li, C., Besarati, S., Goswami, Y., Stefanakos, E., and Chen, H. (2013). "Reverse osmosis desalination driven by low temperature supercritical organic rankine cycle," *Applied Energy*, 102, pp. 1071-1080.
45. Li, C., Goswami, Y., and Stefanakos, E. (2013) "Solar assisted sea water desalination: A review," *Renewable and Sustainable Energy Reviews*," 19, 136-163.
46. Li, C., Kosmadakis, G., Manolakos, D., Stefanakos, E., Papadakis, G., and Goswami, D.Y. (2013) "Performance investigation of concentrating solar collectors coupled with a transcritical organic Rankine cycle for power and seawater desalination co-generation," *Desalination*, vol. 318, no. 3, June, pp. 107-117.
47. Srinivasan, S., Demirocak, E.E., Sharma, P., Goswami, Y., and Stefanakos, E. (2013) "Reversible hydrogen storage characteristics of catalytically enhanced Ca(Li)-nMG-B-N-H system," *Bulletin of the American Physical Society*, volume 58, No. 4, Q15.4, pp. 159-160.
48. Udom, I., Ram, M.K., Stefanakos, E.K., Hepp, A.F., and Goswami, D.Y. (2013). "One dimensional-ZnO nanostructures: Synthesis, properties and environmental applications," *Materials Science in Semiconductor Processing*, 16, 2070-2-83.
49. Vidhi, R., Kuravi, S., Goswami, D.Y., Stefanakos, E., and Sabau, S.A. (2013) "Organic fluids in a supercritical Rankine cycle for low temperature power generation," *Journal of Energy Resources Technology, Transactions of the ASME* 135 (4), doi: 10.1115/1.4023513.

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CONFERENCE PROCEEDINGS (160 presentations)

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95. Choudhury, P., Srinivasan, S., Bhethanabotla, V.R. and Stefanakos, E., (2008) "Transition metal complex hydrides for vehicular applications." *Florida Chapter of the American Vacuum Society and Florida Society for Microscopy 2008 Annual Symposium*, University of Central Florida, Orlando, Florida, March.
96. Krishnan, S., Emirov, Y., Bhansali, S. and Stefanakos, E. (2008) "Effects of Thin Film Non-linear Devices on Post-Deposition Annealing," *FLAVS-FSM 2008*, Orlando, Florida.
97. Niemann, M.U., Srinivasan, S.S., McGrath, K., Kumar, A., Goswami, D.Y. and Stefanakos, E.K. (2008) "Nanocrystalline Effects on the Reversible Hydrogen Storage Characteristics of Complex Hydrides" *In the Proceedings of the American Ceramic Society (ACer) - Materials Innovation in an Emerging Hydrogen Economy*, February.
98. Niemann, M.U., Srinivasan, S.S., Phani, A.R., Kumar, A., Goswami, D.Y. and Stefanakos, E.K. (2008) "Polyaniline nanostructures for hydrogen storage applications," *Materials Research Society Symposium Proceedings*, 1134, September, pp. 37-42.
99. Choudhury, P., Bhethanabotla, V.R. and Stefanakos, E. (2007) "Thermodynamic stability of hydrogen storage materials $ZN(BH_4)_2$: First-principles study," *AICHE Annual Meeting Conference Proceedings*, Salt Lake City, UT, November.
100. Choudhury, P., Bhethanabotla, V.R. and Stefanakos, E. (2007) "Synthesis and characterization of pure

- Zn(BH₄)₂ single crystal." *AIChE Annual Meeting Conference Proceedings*, Salt Lake City, UT, November.
101. Choudhury, P., Bhethanabotla, V.R. and Stefanakos, E. (2007) "Ab-initio calculations for Ni additives in Zn(BH₄)₂," *AIChE Annual Meeting Conference Proceedings*, Salt Lake City, UT, November.
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 105. Krishnan, S., La Rosa, H., Bhansali, S. and Stefanakos, E. (2007) "Characteristics of Rectenna Elements at DC and Millimeter Wave Frequency," *Proceedings of 3rd Annual Graduate Research Symposium*, USF, Tampa, Florida
 106. Krishnan, S., La Rosa, H., Bhansali, S. and Stefanakos, E. (2007) "94 GHz Millimeter Wave Sensor for Concealed Object Detection," *Gordon Research Conferences*, Big Sky, Montana.
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 108. Mbah, J., Krakow, B., Stefanakos, L., Wolan, J. and Smith, M. (2007) "Hydrogen Production from Hydrogen Sulfide in IGCC Power Plants," *ACS Meeting*, St. Petersburg, FL, March.
 109. Srinivasan, S., Escobar, D., Michael, J., Choudhury, P., Bhethanabotla, V.R.; Smith, M., Goswami, Y. and Stefanakos, E. (2007) "Hydrogen storage in nanocatalyzed zincborohydride. *International Hydrogen Energy Congress and Exhibition*, Istanbul, Turkey, 2007.
 110. Srinivasan, S., Escobar, D., Rivera, L., Jurczyk, M., Choudhury, P., Goswami, D. Y. and Stefanakos, E. K. (2007) "Effects of Nanocatalyst Doping on the Hydrogen Storage Behavior of New Complex Borohydrides," in the *Proceedings of the ZERO REGIO Workshop*, Italy.
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- on Control and Automation, MED'06*, art. no. 1700696.
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 119. Krishnan S., La Rosa, H., Bhansali, S. and Stefanakos, E. (2006) "Design and Development of Rectenna based Sensor for Infrared Detection," *Proceedings of 209th Electrochemical Society Meeting*, Denver, Colorado.
 120. La Rosa, H. Krishnan, S. Buckle, K. Stefanakos, E. and Bhansali, S. (2006) "Investigation of Rectenna concept for Infrared and Solar energy conversion," *WAMICON 2006*, Clearwater, Florida.
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 123. Sarehraz, J., Buckle, K., Stefanakos, E. and Weller, T. (2006) "A novel dual polarized dielectric rod antenna," in the *Proceedings of the 2006 IEEE International Workshop on Antenna Technology "IWAT 2006": Small Antennas and Novel Metamaterials*, art. no. 1609015, pp. 211-224.

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126. Srinivasan, S., Rivera, L., Stefanakos, E. and Goswami, Y. (2006) "Mechano-chemical synthesis and characterization of new complex hydrides for hydrogen storage," in the *Materials Research Society Symposium Proceedings*, Vol. 927, 2006, pp. 15-20.
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128. Srinivasan, S.S. and Stefanakos, E.K. (2006) "Synthesis and characterization of new complex borohydrides for hydrogen storage," TMS Annual Meeting 2006, pp. 169-174.
129. Srinivasan, S.S., Stefanakos, E.K. and Goswami, D.Y. (2006) "New transition metal assisted new complex hydrides for hydrogen storage," in the *Proceedings of the 16th World Hydrogen Energy Conference 2006*, Vol 3, 2006, pp. 2658-2663, Lyon, France, June.
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131. Kababji, A., Stefanakos, E. and Wolan, J. (2005) "Thermo catalytic hydrogen production via oxygen free methane aromatization," Paper presented at the American Institute of Chemical Engineers Annual Meeting, Cincinnati, OH, November 2005
132. Kababji, A.H., Wolan, J.T. and Stefanakos, E. (2005) "SiC mixed catalysts for hydrogen and benzene production via methane non-oxidative aromatization," in the *Proceedings of the AIChE Annual Meeting*, pp. 10063-10064.
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146. Heath, M., Stefanakos, E., Wade, T., Miller Jr., W. and Nicolay, H. (1987) "VLSI multilevel metal defect characterization system," in the *Conference Proceedings of the IEEE SouthEastCon*, pp. 50-53.
147. Stefanakos, E. K., Collis, W. J. and Chilukuri, S.B. (1983) "Testing of Concentrator Solar Cells Under High Temperature And Humidity Conditions", *Melcon" 83, IEEE Region 8, Electrotechnical Conference*, Athens, Greece, May .

148. Stefanakos, E.K., Collis, W.J. and Martin, E. H. (1981). "High Temperature Testing Of Solar Cells Under Concentrated Sunlight Conditions", *International Solar Energy Society Conference*, England, August.
149. Goswami, D.Y., Klett, D. E. and Stefanakos, E.K. (1980) "Seasonal Variations of Atmospheric Clearness Numbers for Use in Solar Radiation Modeling," AIAA Paper - 80-0396, *Presented at AIAA 18th Aerospace Sciences Meeting*, Pasadena, CA, January 14-16.
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152. Collis, W.J., Stefanakos, E.K., Abul-Fadl, A., (1979) "LPE Grown Homojunctions in $Ga_{1-x}Al_xAs$ for Solar Cell Applications", *International Solar Energy Congress Conference*, Atlanta, Georgia, May 28-June 1, 1979.
153. McPherson, J., Safavi, A. Collis, W., Stefanakos, E. K., (1979) "Theoretical Analysis of the Band-Bending Properties of Grain Boundaries in GaAs", *Southeastern Sectional Meeting of the American Physical Society*, Nov. 1979.
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155. Delyannis, A., Delyannis, E., Kamarinos, P., Stefanakos, E., (1978) "Demonstration Plant for Solar Heating of a Building", *International Solar Energy Congress Conference*, New Delhi, India, January 6-21, 1978.
156. Delyannis, A., Delyannis, E., Stefanakos, E.K., (1976) "Reflecting Horizontal Solar Collector", presented to the NATO Committee on the Challenges of Modern Society, CCMS, Copenhagen, Denmark, September 13-15, 1976.
157. Griffith, L.V., Stefanakos, E.K., (1975) "Feasibility Studies of Solar Thermal Energy Utilization", *International Conference on Solar Thermal Energy Applications*, Complex-Athens, Greece, November 1975.
158. Stefanakos, E., (1975) "Solar Heating and Cooling of Buildings", *Energy and Man's Environment Conference*, Sun Valley, Idaho, April 17, 1975.
159. Stefanakos E.K. (1970) Diffusion of Alkali Metal Atoms in Niobium and Iron", *7th Symposium of Surface Physics and Chemical Physics*, Washington State University, May 1970.
160. Stefanakos, E.K. (1969) Emission of Impurities from Incandescent Iron", *6th Surface Physics Symposium at Washington State University*, 1969.

CONSULTING EXPERIENCE

- TRW, Inc., Redondo Beach, California - DSSG Group. Iii-V Semiconductor Materials And Devices
- Rockwell International, Thousand Oaks, California. Thin film solar cells.
- Vice President, Solar Engineering Associates, Greensboro, N.C. Design and installation of solar space and water heating systems, photovoltaic Systems.
- Nuclear Research Center, "Demokritos", Athens, Greece. Visiting Professor August- December 1975, Summer 1976; 1998-Present; Consulted on solar energy projects.
- Greek Ministry of Research and Technology, Athens Greece. On solar energy related subjects.
- Microelectronics Center of North Carolina (MCNC)
- World Bank Development of renewable energy (primarily Photovoltaic) systems for health and family planning centers in Bangladesh and Nepal.
- President and Founder, Sigma Tecsystems, Inc, Tampa, Florida, 1993-1998. Components for electric and alternative fuel vehicles and photovoltaic systems.
- Department of Energy, Participated in a panel for review of photovoltaic programs at the National Renewable Energy Laboratory, Sandia National Lab and Florida Solar Energy Center.
- Old Dominion University, 1994. Reviewer, Electrical Engineering Graduate Program.

LEADERSHIP IN PROFESSIONAL SOCIETIES AND OTHER ACTIVITIES

- Member, Board of Governors, International Solar Energy Society (2014-present). <http://ises.org/who-we-are/structure/board-of-directors>
- International Scientific Committee, Solar World Congress 2013, International Solar Energy Society, Cancún, México.
- Invited session organizer and chair, "Solar Energy Storage", International Federation of Nonlinear Analysts (IFNA) World Congress, Athens, Greece, June 27, 2012.
- Advisory Board member, Florida Society of Sustainability Professionals, 2011- Present .

- Vice President and Member of Board of Directors, American Foundation for Greek Language and Culture, 2007.
- Session Chairman and Program Committee Member, Hydrogen Production, ISES Congress, Orlando, August 2005.
- International Program Committee, International Association of Science and Technology for Development (IASTED), Energy and Power Systems, Marbella, Spain, September 3-5, 2003-05.
- Session Chairman, IASTED International Conference, Power and Energy Systems (Europes 2001), Rhodes, Greece, July 3-6, 2001.
- Reviewer, 17th International EE Symposium, Montreal, Canada, October 2000.
- International Scientific Committee, EVS 16, Beijing, China, October 12-16, 1999
- International Scientific Committee, 1st European Conference on Clean Cars and 1st Hellenic Eco Rally, May 15-18, 1997, Athens, Greece.
- Scientific Committee Member of International Electric Vehicle Symposium (EVS-14), Orlando, FL 1997.
- Committee Member of World Electric Vehicle (WEVA) Association (1995)
- Scientific Committee Member of the International Electric Vehicle Symposium (EVS -13), Japan, 1996.
- Board of Directors of the Southeast Center for Electrical Engineering Education (SCEEE).
- Scientific Committee Member and Poster Sessions Organizer, EVS12 International Conference, December 7-10, 1994, Anaheim California.
- Session Chairman, Scientific Committee Member, 11th International EV Symposium, Florence, Italy, September 27-30, 1992.
- Session Organizer and Session Chairman, Electric Vehicles, Southcon '92, Orlando, Florida.
- Session Chairman, 24th ISATA International Symposium on Automotive Technology and Automation (Electric/Hybrid Vehicles), session on Battery Charging, Florence, Italy, 20-24 May, 1991.
- Seminar Organizer, DARPA/Optoelectronics Florida Statewide Review Meeting, Tampa, Fl. Dec. 11, 1989.
- Organizer, Total Quality Management (TQM) Workshop, Presented by Texas Instruments, April 24-25,

1990.

- Organized DOE/SERI/EPRI Visit to USF To Review Photovoltaics Activities, May 23, 1990.
- Chairman, Photovoltaics Committee, ASME International Solar Energy Conference, April 2-5, 1989 San Diego, CA.
- Session Chairman and Session Organizer, 23rd Intersociety Energy Conversion Engineering Conference, Denver, Co. 7/31-8/5, 1988.
- Session Chairman, DARPA/Optoelectronics State-Wide Review Conference, Gainesville, Fl. Feb. 24 1989.
- Session Organizer and Session Chairman, Photovoltaics, 1987 ASME-JSME-JSES Solar Energy Conference, Honolulu, Hawaii, March 22-27, 1987.
- Session Organizer, Microelectronics, Southeastcon '87, April 5-8, 1987, Tampa, Florida.
- Microelectronics Option, MSEE Coordinator, Electrical Engineering, USF, 8/85-Present.
- Session Chairman, Solid State Devices, Southeastcon '85, March 31 - April 3, 1985, Raleigh, North Carolina.
- Session Vice-Chairman, Photovoltaic Power, Sixth Annual Technical Conference ASME Solar Energy Division, April 9-12, 1984, Las Vegas, Nevada.
- Microelectronics Center of N. Carolina, Technical Working Group on Fellowships, 1981 - 1985.
- Member of the Board of Directors and Advisory Council and Vice President (1981) of "Krikos" A Cultural and Scientific Link with Greece, New York, N.Y.
- Graduate Coordinator - Department of Electrical Engineering, N.C.A&T Su, 1978-1983.
- Vice-Chairman - 24th North Carolina Symposium and Exhibition of IEEE, "Impact of Technology on Society", Greensboro, N.C. November 13-14, 1979.
- Technical Program Chairman - 1980 Krikos Conference on "Energy Alternatives for Greece", New York, October 11-12, 1980.
- Program Chairman, Symposium on Emerging Energy Alternatives for The Southeastern States", North Carolina A&T State University, March 31, 1978.

HONORS AND AWARDS

- Faculty Research Fellowship, University Of Idaho, Summer, 1970.
- Sigma Xi Top Award For Research Paper (1970) (University Of Idaho Chapter).
- Listed In American Men And Women Of Science.
- Listed In Who's Who In America.
- NSF International Travel Grant to attend The International Solar Energy Congress, New Delhi, India, January 16-21, 1978.

Honorary and Other Societies:

- Sigma Tau
- Sigma Xi (1969-1979)
- Institute of Electrical and Electronic Engineers (1989-Present) Senior Member
- American Society for Engineering Education
- American Association for The Advancement of Science (1969-1977)
- International Solar Energy Society (1976-Present)

FUNDED RESEARCH PROJECTS

- Global Cool Cities Alliance, "Accelerating the Deployment of Energy Efficiency and Renewable Energy Technologies in South Africa," (2014-2017) Budget: \$ 88,999.00
- Colorado School of Mines, "Sustainable Photovoltaics and Subcontract Coordination (SERIIUS)-CSM" (2013-2017) Budget: \$ 160,000.00
- Tampa Electric Co. "Evaluation of Renewable and Distributed Generation Technologies at the TECO Demonstration Center" (2015-2016) Budget \$75,000.00
- National Renewable Energy Laboratory: Solar Energy Research Institute for India and the United States (January 2012-December 2016) Budget 252,002
- NCSR Demokritos: Linear-Focus Concentrating Solar Collector Based on a Novel Receptor-Development and Demonstration (February 2013-January 2015) Budget: \$19,212
- Associated Gas Distributors of Florida: Field Testing of Gas Heat Pump (July 2012-June 2015) Budget 199,966.
- US Department of Energy, "Development of Low Cost Thermal Energy Storage System" (2011-2015) Budget: \$2,672,790.00

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- Keiler-Atlantic Center of Excellence, “PCM Thermal Energy Storage and Transport System (TEST) for the Utilization of Geothermal Heat and other Heat Sources,” (2014) Budget: \$159,369
 - US DOE, “Development and Demonstration of an Innovative Thermal Energy Storage System for Baseload Solar Power Generation”, (Aug. 2010-July 2013), Budget: \$4,537,289
 - E-On International, “Innovative Latent Thermal Energy Storage System for Concentrating Solar Power Plants”, PI: Goswami, Co-PIs: Stefanakos; Rahman; Project Dates: January 2011 – December 2013; Total Costs: \$814,108
 - Florida State Legislature, “Florida Energy Systems Consortium”, Y. Goswami and E. Stefanakos, et al. Combined Budget: \$8.75M September 2008-August 2011
 - Florida Energy Systems Consortium, E. Stefanakos, PI: “Clean Drinking Water using Advanced Solar Energy Technologies,” Budget: \$326,765, September 2008-August 2011.
 - US DOE/University of Central Florida, “Florida Hydrogen Initiative (FHI), Stefanakos, E., Goswami, D., and Kumar, A. Combined budget: \$386,853, July 2010-June 2011
 - Advanced Technologies and Testing laboratories, “Design and Development of Photocatalytic Air Cleaning Units Based on ATTL Photoelectronix. Stefaanakos, E. \$15000, October 2010 – October 2011.
 - US DOE “Hydrogen Storage in Complex Metal Hydrides”, Stefanakos, E., Goswami, Y. and Bhethanabotla, V.R. July, 2006 – July, 2009.
 - US DOE (EERE) “Fuel Cell And Hydrogen Research”, E. Stefanakos, Y. Goswami, Us Department Of Energy, \$5,000,000, May 2004 To August 2009.
 - US DOE (NETL) “Hydrogen Production from Hydrogen Sulfide in IGCC Power Plants”, E. Stefanakos, B. Krakow, \$49,000, August 25, 2005 To August 24, 2007.
 - NASA Glenn/UCF. “Hydrogen Production, Storage And Safety”, E. Stefanakos, B. Krakow, V. Bhethanabotla, S. Bhansali, M. Rahman, J Wolan, \$1,880,000, 6/1/02-12/31/06.
 - FDOT/CUTR, “Assessment and Evaluation of Alternative Fuel Options”, E. Stefanakos, G. Moore, \$23,800, June 1, 2004 to December 31, 2005.
 - Center for Biological Defense (USF) (US Army) “Photocatalytic Air Disinfectionton To Destroy Airborne Hazardous Microorganisms”, E. Stefanakos, B. Krakow, \$128,924, Oct. 1, 2002 To Jan. 31, 2005.
 - NASA/through Florida Solar Energy Center “Hydrogen Production, Storage and Monitoring”, Stefanakos, L., Bhethanabotla, V.R., Bhansali, S., Benson, R. L, Rahman, M. M., January, 2005 to December, 2005. Third

year renewal, \$690,000.

- NASA Glenn/UF “Visible Light Rectenna Project”, E. Stefanakos, K. Buckle, S. Bhansali, T Weller, \$135,000, Oct. 1, 2002 To Sept. 30, 2004.
- NASA/through Florida Solar Energy Center “Hydrogen Production, Storage and Monitoring”, Stefanakos, L., Bhethanabotla, V.R., Bhansali, S., Benson, R. L, Rahman, M. M. September, 2003 to September, 2004, Second year renewal, \$690,000.
- NASA/through Florida Solar Energy Center “Hydrogen Production, Storage and Monitoring”, Stefanakos, L., Bhethanabotla, V.R., Bhansali, S., Benson, R. L, Rahman, M. M., \$750,000 NASA+\$360,000 July, 2002 to September, 2003.
- US DOE/Florida Energy Office/Tampa Electric, “Electric Power Generation From A Microturbine Operated Landfill Gas”, E. Stefanakos, Burt Krakow, \$140,000, 1/1/02-12/31/03.
- Rivolta – I-4 Corridor, “Conversion Of The Rivolta Isigo Ice Vehicle To Electric” E. Stefanakos And K. Buckle, \$130,000, 1/1/99 – 12/31/2000.
- Florida Energy Office, “Electric Shuttle Bus Demonstration”, E. Stefanakos and G. Moore, \$50,000, 10/21/98 – 12/31/2000
- NREL/Florida Energy Office, “Clean Energy for West Central Florida” E. Stefanakos and B. Krakow, \$40,000, 10/22/98 – 12/31/2000.
- DOE/USF TDC with Lockheed/Martin, Phase II. Universal Battery Charger & Monitor, E. Stefanakos, K. Buckle, S. Garrett & K. Klontz, \$495,000, 1/1/96-9/30/96.
- Florida Energy Office, "The Demonstration of an Advanced PV Charging Station For EV's," E. Stefanakos, \$630,000, 5/22/95-12/31/99.
- DOE/USF TDC with Lockheed/Martin, Phase I. "Universal Battery Charger & Monitor", E. Stefanakos, K. Buckle & S. Garrett, \$45,971, 12/20/94-3/5/95.
- Florida Power Co., "End Use Technology", E. Stefanakos, J. Porteiro, \$145,488, 5/9/94-12/10/94.
- Florida Power Co., "Gas Heat Pump Characterization", E. Stefanakos and J. Porteiro, \$96,687, 9/1/94 to 12/10/94.
- Advanced Research Program Agency (ARPA), "EV Technology & Infrastructure", E. Stefanakos and G. Moore, \$100,000, 12/3/93-12/2/95.
- Tampa Electric Co., "Electric Vehicle Infrastructure Research", E. Stefanakos, et al., \$39,000, 4/1/93-

12/31/94.

- Florida Power Co., "EV/PV Test & Evaluation", E. Stefanakos, P. Wiley, \$100,000, 6/1/92-12/31/95.
- National Renewable Energy Laboratory (NREL), "Photovoltaic System for Electric Vehicle Charging", E. Stefanakos and P. Wiley. \$45,000, 9/1/92-8/30/93.
- Florida Energy Office, "Electric Vehicle/Photovoltaic Demonstration and Evaluation Program", E. Stefanakos, P. Wiley \$698,964, 8/15/91-7/31/96.
- U. S. Department of Energy, "Electric Vehicle/Photovoltaic Test And Evaluation Program", E. Stefanakos, P. Wiley, \$505,294, 8/6/91-4/29/95.
- Hillsborough County Environmental Protection Commission, "Solar Energy/Electric Vehicle Test and Demonstration Program", E. Stefanakos, P. Wiley. \$39,000 7/1/91-6/30/92.
- DARPA, "Advanced Microelectronics and Materials Program", Program Coordinator for the DARPA/USF Optoelectronics Part. E. Stefanakos \$2,830,000, 7/1/88--6/30/91.
- NSF, "Special Graduate Student Education And Research Award", E. Stefanakos \$6,000, 7/1/90-6/30/91
- Florida Solar Energy Center (FSEC), "Thin Film Photovoltaic Module/Array Testing" E. K. Stefanakos, \$18,219, 1/1/87-12/31/87.
- Microelectronics Design And Test Center, USF, "Reliability Testing of Microelectronic Test Structures, Devices and Integrated Circuits" E. Stefanakos, M. Ammons, J. Leffew, \$72,349, 12/24/86-12/22/87.
- Center for Research In Electro-Optics and Lasers (CREOL), UCF, "Development of INP Bulk Crystals and III-V Epi-Layers for Electro-Optic Devices", E. Stefanakos, M. Ammons, S. Sundaram, \$50,000 (USF Contribution \$60,000), 1/27-6/30/87.
- Harris Co., "Development of VLSI Multilevel Interconnection Yield Test Vehicle", T. Wade, E. Stefanakos, \$53,320.00, 4/22/86 - 4/21/87.
- USF Research Council - University Industry Linkage Grant, "VLSI Multilevel Interconnection Defect Density Characterization System", E.K. Stefanakos, \$6,428 5/L/86 - 4/30/87.
- USF Faculty Research and Creative Scholarship Award, "Characterization of Semiconductor Compounds by Low Temperature Photoluminescence", E.K. Stefanakos, \$7,500 12/1/85 - 11/30/86.
- U.S. Army Research Office, "Current Controlled LPE Growth of InGaAsP", E.K. Stefanakos and S. Iyer \$221,710 July 1, 1984 - June 30, 1986.

- NASA, Grant Nsg-1390 On "Material Growth and Characterization For Solid State Devices", E.K. Stefanakos, W. J. Collis, A. Abul-Fadl and S. Iyer, \$525,000 December 1, 1983 to November 30, 1986.
- Naval Research Laboratories, "Growth of InGaAs for Microwave Devices", A. Abul-Fadl, E.K. Stefanakos and W. J. Collis, \$40,000 For Period August 1, 1981 To September 30, 1982.
- National Aeronautics and Space Administration, Grant - NSG-1390 on "Material Growth and Characterization for Solid State Devices", E.K. Stefanakos, W. J. Collis and A. Abul-Fadl. \$150,000 per year for the Period May 15, 1980 to November 30, 1983.
- Wright Patterson AFB, Aeronautical Systems Division, "Current Controlled Lpe Growth of Semiconductors". E.K. Stefanakos, A. Abul-Fadl, and W.J. Collis. \$200,000 for Period July 15, 1980 to September 30, 1983.
- U.S. Army Research Office, "Thermal Conductivity of Ternary and Quaternary III-V Compounds", W.J. Collis, J.W. Mcpherson, E.K. Stefanakos, \$564,000 March 1980 to March 1983.
- Central Intelligence Agency, "Investigation of a GaAs-GaAlAs Solar Cell Structure Utilizing Transferred Electrons to Increase the Output Voltage". W.J. Collis, E.K. Stefanakos. \$35,905, May 15, 1981 to June 30, 1982.
- Air Force Wright Aeronautical Laboratories, Wright Paterson Afb, Ohio. "Renewable Energy System Feasibility Study" D.E. Klett, D.Y. Goswami, E.K. Stefanakos, D.E. Olson. \$112,349. September 1, 1980 to August 31, 1981.
- Sandia Laboratories, Albuquerque, New Mexico, "Solar Cell Testing and Evaluation", \$20,800. E. K. Stefanakos, and W. J. Collis Period: May 1, to December 31, 1980.
- Solar Energy Research Institute - Sub-Contract XS-9-8032-1, "Development of Thin Film Solar Cells", E.K. Stefanakos, W.J. Collis, J.W. Mcpherson, \$43,000. April 1 to August 31, 1980.
- National Aeronautics and Space Administration, Grant NsG-1390 On "Material Growth and Characterization Directed Toward Iii-V Semiconductor Devices" E.K. Stefanakos, W.E. Alexander, W. Collis, A. Abul-Fadl. February 1, 1977 To January 31, 1980, \$450,000
- Department of Energy, "Solar Radiation Handbook and Solar Collector Test Facility for North Carolina", \$100,000, D. Klett, Y. Goswami, E.K. Stefanakos, September 1, 1978 To Sept. 1979.
- National Science Foundation, Grant NSF DMR-77-19210 on "Current Controlled Liquid Phase Epitaxy", \$65,000. E.K. Stefanakos, A. Abul-Fadl, June 1977 - November 1979.

- Sandia Laboratories, Albuquerque, New Mexico, "Solar Cell Evaluation and Testing", \$30,000. W.E. Alexander, E.K. Stefanakos, R. Kuehn, September 1977 to October 1979.
- Department Of Energy, Contract No. Eg-77-C-03-1712 via Rockwell International "Program for the Development of High Efficiency Polycrystalline Solar Cells". E.K. Stefanakos, W.J. Collis, J. Mcpherson, A. Abul-Fadl. January 23, 1978 to December 31, 1979. \$288,000.00
- Department Of Energy Grant No. EU-78-G05-5891, "Symposium on Emerging Energy Alternatives for the Southeastern States", \$3,000, E. Stefanakos, March 1, To December 31, 1978.
- Idaho Nuclear Energy Commission, Grant NEAT #03-76-001, on "Feasibility Study of Solar Heating and Cooling of Buildings", \$9k, E. Stefanakos 1975-76.
- Idaho Nuclear Energy Commission, Grant NEAT #03-74-016, on "Fabrication and Testing of High Efficiency Solar Cells", \$8k, E. Stefanakos 1974-75.
- Idaho Research Foundation, Grant STAR 41-094, on "High Efficiency Solar Cells", \$6k, E. Stefanakos 1974-75
- National Science Foundation, Grant NSF Gk-27854, on "Ion Emission Measurements of Alkali Metal Diffusion in Transition Metals", \$30k, E. Stefanakos 1971-72.

PERSONAL

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