

CURRICULUM VITAE**Dr. Purusottam Jena****I. Personal Information**

Place of Birth: Mukhura, India
 Citizenship: U.S.A.
 Military Service: None
 Marital Status: Married, one son (35 years old)
 Home Address: 9906 Colony Bluff Drive
 Richmond, VA 23238
 Phone: (804) 741-7724 (Home)
 Office Address: Physics Department
 P. O. Box 842000
 Virginia Commonwealth University
 Richmond, VA 23284
 Phone: (804) 828-8991
 FAX: (804) 828-7073
 E-mail: PJENA@VCU.EDU
 Web site : <http://physics.vcu.edu/jenasgroup/>

II. Education

Ph.D. (Physics) University of California, Riverside, California, 1970
 Thesis Title - "Electronic Structure and Hyperfine Properties of Group II Metals"

M.Sc. (Physics) Utkal University, Orissa, India, 1966

B.Sc. (Physics) (Honors with Distinction) Utkal University, Orissa, India, 1964

III. Academic Appointments and Other Significant Work Experience

Virginia Commonwealth University, Richmond, VA

Distinguished Professor of Physics, 2005 - present

Founding Director, Consortium for Nanostructured Materials, 1992 – 2000

Chairman of Department of Physics, 1989 - 1991

Professor of Physics, 1982 – 2005

Associate Professor of Physics, 1980-82.

United States Department of State, Washington, DC

Jefferson Science Fellow and Senior Science Advisor, 2007-2008

BDM Corporation, McLean, VA

Consultant, 1985-1991.

Division of Materials Research, National Science Foundation, Washington, D. C.

Program Director, 1986-1987.

Michigan Technological University, Houghton, MI
Associate Professor of Physics, 1978-80.
Argonne National Laboratory, Argonne, IL
Visiting Scientist, 1977-78
Northwestern University, Evanston, IL
Visiting Assistant Professor of Physics, 1975-77
University of British Columbia, Vancouver, B.C
Research Associate in Physics, 1973-75.
Dalhousie University, Halifax, N.S
Postdoctoral Fellow in Physics, 1971-73.
State University of New York, Albany, NY
Lecturer in Physics, 1970-71.
University of California, Riverside, CA
Research and Teaching Assistant in Physics, 1966-70

IV. Administrative Experience

During my academic career I have gained substantial administrative experience in various roles:

- As a Jefferson Science Fellow at the US Department of State I have advised on foreign policy issues dealing with science and technology, worked on bi-national and multi-national partnership agreements on science and technology, and worked with a US Government inter-agency team to organize the Washington International Renewable Energy Conference that attracted 9000 participants from 125 countries including 103 ministers and the President of the United States. I also served as the Co-Chair of the US-Russia Experts' meeting on Energy and Nanoscience as part of the Presidential Commission on US-Russia Partnership.
- As a program director in the Condensed Matter Theory Program at the National Science Foundation, I managed grant proposals and awards as well as the budget.
- As Chairman of the Physics Department at Virginia Commonwealth University, I was responsible for all departmental matters concerning faculty, staff, students, and budgets.
- As the Principal Investigator of over \$12 million in grants, I have experience in managing research budgets and staff.
- As the Founding Director of the Consortium on Nanostructured Materials, which has 34 member institutions, I was responsible for catalyzing collaboration among members of the consortium.
- As a member of numerous university, college, and departmental committees, I have contributed to important policy making issues.
- As a member of national panels at the National Science Foundation and the Department of Energy, I have contributed to the development of science.
- As the Chair/Co-Chair/Advisory Board member/Organizing Committee member of over 50 international conferences, focused sessions/symposia for the American Physical Society, American Chemical Society, and Materials Research Society I have acquired substantial experience in organizational matters.

V. Fields of Special Interest

Condensed Matter Physics

- *Metals and Alloys*: Electronic structure and properties of magnetic and nonmagnetic metals and ternary alloys involving energy band studies, electron density of states, electron-nuclear interaction, positron annihilation, pressure and temperature dependence.
- *Semiconductors, Intermetallics, and Insulators*: Electronic structure and phase transition in heavily doped semiconductors, susceptibility and hyperfine properties of rare-earth mononictides, electron polarization in intermetallic actinide compounds, electronic structure of substoichiometric iron alluminides, and dilute magnetic semiconductors.
- *Point Defects in Metals*: Electronic structure and properties of mono-vacancies, voids, interstitial, and substitutional impurities in para- and ferromagnetic metals.
- *Hydrogen Interactions*: Hydrogen interactions with metals and nanostructures; hydrogen storage in light complex metal hydrides.
- *Liquid Metals*: Structure, ordering, liquid-solid phase transitions, and electronic properties.

Materials Science:

Structure of defect complexes, trapping of gas atoms such as hydrogen, helium, and nitrogen by intrinsic lattice defects, determination of trap geometry and trapping energies, lattice deformation, interionic potentials, surfaces, interfaces, composites.

Atomic Clusters:

Equilibrium geometries, electronic structure, nucleation, fragmentation, magnetism, optical properties, and energetics of neutral and charged clusters, compound clusters, cluster assemblies, crystals of clusters, coated and supported clusters.

Biomedicine:

Noninvasive treatment of tumors through magnetic fluid hyperthermia and near infrared therapy, serotonin receptors

Mathematical Physics:

Classical and quantum statistical mechanics, non-equilibrium phenomena

VI. Membership in Professional and Honor Societies

- American Physical Society
- Indian Physical Society
- Sigma Pi Sigma
- Phi Kappa Phi

VII. Special Awards, Fellowships and Other Honors

- Outstanding Scientist of Virginia, Presented by Virginia Science Museum on behalf of the Governor of Virginia, Hon. Terry McAuliffe, 2015

- Presidential Medallion, Virginia Commonwealth University, 2011
- Co-Chair, USA-Russia Bilateral Presidential Commission on Nanoscience, 2011
- Distinguished Jefferson Science Lecture, US Department of State, 2009
- Jefferson Science Fellow, US Department of State, 2007-08
- David Hare Professorship Lecture, Indian Association for Cultivation of Science, Kolkata, India, 2005.
- Outstanding Faculty Award, State Council of Higher Education of Virginia, awarded by Governor of Virginia, Hon. Jim Gilmore, 2001
- Fellow, American Physical Society, 2000
- University Award of Excellence, Virginia Commonwealth University (the highest academic honor given by Virginia Commonwealth University), 1993
- Chairman, Gordon Conference on Hydrogen-Metal Systems, 1993
- Distinguished Scholar Award, Virginia Commonwealth University, 1987
- Listed in American Men and Women in Science
- Salem College (U.S.A.) Fellowship (I was one of three students chosen from a competition held all over India), 1961
- Merit Scholarship, India 1960-66
- Invited to give talks at 207 International Conferences and 224 universities and research laboratories in 30 countries (Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Egypt, England, Finland, France, Germany, Greece, Iceland, India, Ireland, Italy, Japan, Mexico, Morocco, Netherlands, Peoples Republic of China, Poland, Portugal, Spain, Singapore, Sweden, Switzerland, Taiwan, U.S.A., and Vietnam), and to preside over numerous scientific sessions in international conferences.

VIII. Significant Scholarly and Professional Service

Over the past 37 years of my academic career I have provided considerable service to my institution, nation, and the world in various capacities. These include numerous committees at the department, college, and university level; reviewing articles for journals and proposals for funding agencies, serving on national and international review panels and advisory boards, and organizing international conferences, workshops, and symposia. My service to the society has been in the form of Jefferson Science Fellow at the US Department of State where I continue to provide scientific advice on national and international programs as well as serving on Presidential Commission. A partial list of my professional service is given in the following.

Member of Editorial Boards, Review Panels, Advisory Boards, External Examiner:

- Member, Editorial Board, Super Lattices and Microstructures, Academic Press
- Member, International Editorial Board, Reviews on Advanced Materials Science
- Member, Editorial Board, Oxford University Press: Book Series on "Mesoscopic Physics and Nanotechnology"
- Member, Jefferson Science Fellows Selection Panel, US Department of State, 2015
- Member, National Science Foundation MRSEC Review Panel, Washington D.C., USA 2014
- Member, National Science Foundation, DMREF Review Panel Washington D.C., USA 2013
- Member, Partnerships for Enhanced Engagement in Research (PEER) Panel for USAID, 2012
- Member, National Science Foundation Review Panel on Hydrogen Storage, Washington DC, USA 2007

- Member, Ph. D. Thesis Examination Committee, Univ. of Uppsala, Sweden, 2003, 2004, 2006, 2012
- Member, Review Panel, National Renewable Energy Laboratory, Denver, CO, USA 2006
- Member, Advisory Board, Global School for Advanced Materials Studies, Northwestern Univ., Chicago, IL USA 2005
- Member, Executive Committee, DOE Workshop on Hydrogen Production, Storage, and Use, USA 2003
- Member, National Science Foundation Panel on Materials Science and Engineering Center, USA 2000
- Member, National Science Foundation Panel on Material Research Group, USA 1993
- Member, National Science Foundation Panel on U.S.-People's Republic of China Science Exchange Program, 1992
- Member, Department of Energy Council on Materials Science panel on "Fundamental Issues on Hydrogen Materials Interactions", USA 1990

Reviewer for the Following Scientific Journals:

- Applied Physics Letters
- Carbon
- Chemical Communications
- ChemPhysChem
- Chemical Sciences
- Chemistry: A European Journal
- Chemical Physics Letters
- Chemical Review
- Computational Materials Science
- Dalton
- European Journal of Physics
- Foundations of Physics
- Hyperfine Interactions
- International Journal of Hydrogen Energy
- International Journal of Quantum Chemistry
- Journal of Alloys and Compounds
- Journal of the American Chemical Society
- Journal of Chemical Physics
- Journal of Electron Microscopy
- Journal of Magnetism and Magnetic Materials
- Journal of Nanostructured Materials
- Journal of Physical Chemistry
- Journal of Physics
- Langmuir
- Nanoscale
- Nature
- Nature Communications
- Physica
- Physica Status Solidi
- Physical Chemistry Chemical Physics
- Physical Review

- Physical Review Letters
- Physics Letters
- Physics Reports
- Pramana
- Proceedings of the National Academy of Sciences
- Reviews of Modern Physics
- Science
- Solid State Communication
- Zeit fur Physik D

Reviewer for the Following Funding Agencies:

- National Science Foundation
- Army Research Office
- Department of Energy
- Air Force Office of Scientific Research
- Research Corporation
- Jeffress Memorial Trust
- Petroleum Research Fund
- Australian Research Council
- University Research Council of Hong Kong

Organizer of the Following Conferences:

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| • International Symposium on the "Electronic Structure and Properties of Hydrogen in Metals" (Co-Chair), Richmond, VA | USA | 1982 |
| • Conference on Isotope Effects on Properties of Metal-Hydrogen Systems (Chair), Richmond, VA | USA | 1985 |
| • International Symposium on the "Physics and Chemistry of Small Atomic Clusters" (Co-Chair), Richmond, VA | USA | 1986 |
| • Conference on "High Technology Materials" (Co-Chair), Richmond, VA | USA | 1989 |
| • International Symposium on "Highlights in Condensed Matter Physics" (Co-Chair), Trieste | Italy | 1989 |
| • Symposium on "Hydrogen Pairing in Metals", March Meeting of the A.P.S. (Co-Chair) | USA | 1990 |
| • International Symposium on the "Physics and Chemistry of Finite Systems: From Clusters to Crystals" (Co-Chair), Richmond, VA | USA | 1991 |
| • Workshop on "Regional Center for Studies of Finite Systems" (Chair), Richmond, VA | USA | 1992 |
| • International Conference on "Local Order in Condensed Matter Physics" (Co-Chair), Jekyll Island, GA, | USA | 1993 |
| • Gordon Research Conference on "Hydrogen-Metal Systems" (Co-Chair), Tilton, NH | USA | 1993 |
| • International Workshop on Clusters & Nanostructured Materials (Co- Chair), Puri | India | 1994 |

- Symposium on "Clusters and Cluster Assembled Materials" (Co-Chair), March Meeting of A.P.S. USA 1994
- International Symposium on the Science and Technology of Atomically Engineered Materials (Chair), Richmond, VA USA 1995
- International Conference on Novel Materials (Member, Organizing Committee), Puri India 1996
- International Conference on Theory of Atomic and Molecular Clusters (Member, Organizing Committee), Fontana, WI USA 1996
- Focused Sessions on Magnetism of Clusters and Nanostructures (Chair), March Meeting of A.P.S. USA 1997
- Symposium on "Recent Developments on Magnetism at the Nanoscale" (Chair), March Meeting of A.P.S. USA 1998
- International Symposium on Cluster and Nanostructure Interfaces (Chair), Richmond, VA USA 1999
- Focused Sessions on Hydrogen in Materials (Chair), March Meeting of A.P.S. USA 2001
- Focused Sessions on Cluster and Nano-assemblies (Chair), March Meeting of the A.P.S. USA 2002
- International Conference on Novel Materials: From Clusters to Nano-Assemblies (Chair), Jekyll Island, GA USA 2002
- 9th International Conference on Muon Spin Rotation, Relaxation, and Resonance (Member, Organizing Committee), Williamsburg, VA USA 2002
- Basic Energy Sciences Workshop on Hydrogen Production, Storage, and Use (Member, Executive Committee), Washington, D.C. USA 2003
- International Symposium on Clusters and Nano-Assemblies: Physical and Biological Systems (Chair), Richmond, VA USA 2003
- Nanoscale Materials: From Science to Technology – Indo-US Workshop (Co-Chair), Puri India 2004
- DOE Workshop on Hydrogen Interaction with Materials (Chair), Washington, D.C. USA 2004
- Symposium on Size Selected Clusters (Member, Organizing Committee), Brand Austria 2005
- Hydrogen Storage with Novel Nanomaterials (Co-Chair), Bad Honnef Germany 2005
- International Workshop on Clusters: A Bridge across Disciplines (Chair), Jekyll Island, GA USA 2006
- International Symposium on Materials Issues in a Hydrogen Economy (Chair), Richmond, VA USA 2007
- Indo-US Workshop on Science and Technology at the Nano-Bio Interface (Co-Chair), Bhubaneswar India 2008
- ASM/ACS Symposium on Hydrogen Economy (Member, Organizing Committee), Cocoa Beach, FL USA 2008
- Washington International Renewable Energy Conference

• (Member, Organizing Committee), Washington DC	USA	2008
• MRS/DOE Theory Focus Session on Hydrogen Storage Materials (Member, Organizing Committee), San Francisco, CA	USA	2008
• Washington International Renewable Energy Conference (Member, Organizing Committee and Co-Chair of the R&D Focal point), Washington, DC	USA	2008
• AsiaNano2008 (Member, International Advisory Board)	Singapore	2008
• Second DAE-BRNS International Symposium on Materials Chemistry (Member, International Advisory Board) Mumbai	India	2008
• Symposium on Size Selected Clusters (Member, Organizing Committee), Brand	Austria	2009
• International Conference on Clusters and nanostructures, Jekyll Island, Georgia (Chair)	USA	2010
• American Ceramic Society - Materials Challenges in Alternative & Renewable Energies, (member – Organizing Committee) Cocoa Beach, Florida	USA	2010
• US-Russia Exeprts' Meeting on Nanoscience-Energy, Washington, D.C. (Co-Chair)	USA	2010
• 5 th Forum on New Materials – Materials and Process Innovations in Hydrogen Production and Storage, (Member – Organizing Committee), Montecatini Terme, Tuscany	Italy	2010
• Symposium on Selected and Supported Clusters (Member – Organizing Committee), Davos	Switzerland	2011
• ACCMS-6, Singapore (Member-Advisory Board)	Singapore	2011
• International Symposium on Clusters and Nanostructures Richmond, VA (Chair)	USA	2011
• Symposium on Size Selected Clusters, (Member - Organizing Committee), Davos	Switzerland	2013
• International Conference on Materials under Extreme Conditions, Miami	USA	2013
• Principal Investigators Meeting, Department of Energy Office of Basic Energy Sciences, Washington, DC (Co-Chair)	USA	2013
• ACCMS-7, Nakhon Ratchasima (Member-Advisory Board)	Thailand	2013
• ICCP9, Symposium on Renewable Energy Materials	Singapore	2014
• International Symposium on Clusters and Nanostructures Richmond, VA (Chair)	USA	2015
• ACCMS-8, Taipei (member-Advisory Board)	Taiwan	2015
• Symposium on Size Selected Clusters, (Member - Organizing Committee), Davos	Switzerland	2016
• 9 th International Conference on Fine Particle Magnetism Washington DC (Member - Organizing Committee)	USA	2016

University Committees:

Michigan Technological University:

- Screening Committee for selecting the Department Head
- Screening Committee for selecting an Associate Professor
- Advisory Committee to the Dean of College of Arts and Sciences to plan and implement a new structure for the Department's future
- Colloquia Committee
- Space Committee

Virginia Commonwealth University: (Partial list)

University Level

- Task Force on Super Computing
- Search Committee for Director, Academic Computing
- Faculty Senate
- Search Committee, Dean, School of Engineering
- Search Committee, Chairs for Electrical, Mechanical, Biomedical, and Chemical Engineering Depts.
- Promotion and Tenure Committees (Chair for the School of Engineering)
- Research Advisory Council
- Chair, Subcommittee on Research Support
- Honors Council
- Promotion and Tenure Review Task Force
- Search Committee, Vice President for Research and Graduate Affairs
- Council of Advisors to the President of VCU
- University Strategic Planning Commission
- Interagency Governor's Task force for Energy Project Recruitment in the Commonwealth of Virginia
- Search Committee for the Provost and Vice President for Academic Affairs

College Level

- Computing Advisory Committee
- Ad hoc Committee to Review the Adjuncts
- Arts and Sciences Subcommittee to review the recommendations of the University Task Force on Evaluation of University Computing Options
- Subcommittee of A.C.A.C
- Academic Computing, Representative
- Dean's Executive Committee
- College Self-Study Committee for Research
- Graduate Curriculum Committee
- Undergraduate Curriculum Committee
- Dean's Promotion and Tenure Advisory Committee
- Organizing Committee for Conference on Nuclear Issues
- Library Committee

- Promotion and Tenure Committee for faculty in Chemistry and Mathematics
- Thesis Defense Committee

Department level

- Colloquium Committee
- Faculty Search Committee, Physics Department
- Departmental Promotion and Tenure Committee
- Search Committee for Physics Faculty
- Search Committee for Physics Postdoctoral Fellow
- Three Year Review Committee
- Chairman, Physics Department
- Physics Ph.D. Development Committee
- Dual Degree Revision Committee
- Library Committee
- Advisory Committee to the Department Chairman
- Executive Committee of the Physics Department
- Chairman, Search Committee for Physics Chairman
- Graduate Academic Committee
- Ph.D. and M.S. Defense Committee

IX. Grants Received

• Interphase boundary-initiated fracture: Co-P.I., National Science Foundation,	1978-81	\$997,340
International travels grant to present an invited paper in Japan, National Science Foundation	1979	\$1,400
• Electronic Structure of Point Defects in Metals, Michigan Technological University Research Fund	1979-80	\$4,600
• Science Exchange - USA – India, International Program, National Science Foundation, travel grant to India to initiate collaborative research	1981	\$2,392
• International Symposium on the Electronic Structure and Properties of Hydrogen in Metals, NATO National Science Foundation EXXON Virginia Commonwealth University	1982	\$26,000
• Theoretical Study of the Electronic Structure of Impurity-Vacancy Complexes, VCU Grants-in-Aid	1982	\$5,000
• U.S. - Finland Science Exchange Program - National Science Foundation	1982	\$2,250
• Electronic Structure of Vacancy-Hydrogen Complexes in Metals, Research Corporation	1983	\$4,300
• Electronic Structure of Defect Complexes in Metals – The Thomas Jeffress and Kate Miller Jeffress Memorial Trust	1983-1986	\$40,500

• National Science Foundation	1984-1987	\$17,730
• Electronic Structure and Properties of Defect Complexes in Metals, Army Research Office	1985-1988	\$264,338
• International Symposium on Physics and Chemistry of Small Clusters,	1986	\$98,000
○ National Science Foundation		
○ Department of Energy		
○ NASA		
○ Air Force Office of Scientific Research		
○ NATO		
○ Virginia Commonwealth University		
○ Philip Morris USA		
• Physics of Small Atomic Clusters, The Thomas Jeffress and Kate Miller Jeffress Memorial Trust	1986-87	\$17,000
• Electronic Structure and Properties of Compound Metal Clusters, Department of Energy	1987-90	\$379,631
• Electronic Structure of Micro-clusters and Defect Complexes, Army Research Office	1988-91	\$300,000
• Microscopic Probes of High Temperature Superconductivity, C.I.T and E.P.R.I.	1989-91	\$118,440
• Electronic Structure and Dynamics of Metal Clusters, National Science Foundation	1989-92	\$16,600
• Structure, Stability, and Spectroscopy of Metal Clusters, Department of Energy	1990-93	\$430,507
Graduate Fellowship for Minority Student, National Science Foundation	1990-92	\$24,000
• International Symposium on the Physics and Chemistry of Finite Systems, Richmond	1991	\$90,000
○ National Science Foundation		
○ Office of Naval Research		
○ Army Research Office		
○ NATO		
○ Philip Morris USA		
○ Oak Ridge Associated Universities		
○ Virginia Commonwealth University		
• Electronic Structure of Finite Systems, Army Research Office,	1992-95	\$295,000
• International Symposium on Local Order in Condensed Matter Physics, Army Research Office	1992	\$10,000
• Clusters and Cluster Reactions, Department of Energy	1993-96	\$474,277
• International Symposium on the Science & Technology of Atomically Engineered Materials	1995	\$72,000
○ National Science Foundation		
○ Army Research Office		
○ Virginia Commonwealth University		
○ Philip Morris USA		
• Electronic Structure and Magnetism of Mixed Atomic Clusters, Army Research Office	1995-98	\$300,000

• Augmentation Awards for Science & Engineering Research Training, Army Research Office	1995-98	\$78,000
• Clusters and Cluster Assemblies, Department of Energy,	1996-1999	\$563,144
• Compound Metal Clusters and Cluster Assemblies, Department of Energy	1999-2002	\$585,660
• Conducting Materials, (Phase I of STTR, Air Force)	1999	\$30,000
• International Symposium on Clusters and Nanostructure Interfaces:		\$63,000
○ National Science Foundation - \$15,000,		
○ Army Research Office - \$20,000,		
○ Philip Morris USA - \$15,000,		
○ Virginia Commonwealth University - \$13,000.		
• Quantum Design of High Energetic Materials, Conducting Materials (STTR Phase II, Air Force)	2001-2003	\$200,000
• Trapping of Butadiene by Metal Atoms, Philip Morris, USA 2001-2003		\$324,675
○ Addendum	2002	\$91,641
• Large Defect Reduction in Epitaxial Films of SiC and GaN via Growth on Nano-porous Templates, (Co-PI), Office of Naval Research (DURINT project)	2001-2006	\$290,000
• Transition Metal Clusters Supported on Molecular Templates, Department of Energy	2002-2005	\$536,740
• Synthesis of Multi-functional Materials, (Co-PI), Office of Naval Research	2002-2005	\$155,448
• International Symposium on Clusters and Nano-Assemblies: Physical and Biological Systems	2003	\$94,999
○ National Science Foundation \$20,000,		
○ Department of Energy \$9,999,		
○ Army Research Office \$10,000,		
○ Air Force Office of Scientific Research \$10,000,		
○ National Aeronautics and Space Administration \$5,000,		
○ CIT/NANO-VA \$5,000,		
○ Philip Morris USA \$20,000,		
○ Virginia Commonwealth University, \$15,000.		
• Interaction of CO, NO, and O ₂ on Metal-Oxide Catalysts and Reduction of PAH's Using Metal Atoms, Philip Morris USA	2004-2006	\$318,728
• Coated and Supported Metal Clusters, Department of Energy	2005-2008	\$547,404
• Complex Hydrides—A New Frontier for Future Energy Applications, Ames Laboratory, Department of Energy	2005-2008	\$433,800
• Molecular Modeling of Metal Nanostructures for Hydrogen Storage, Savannah River National Laboratory, Department of Energy	2006-2009	\$177,600
• International Symposium on Materials Issues in a Hydrogen Economy	2007-2008	\$100,000

- Virginia Commonwealth University, \$35,000
- National Science Foundation, \$20,000
- Department of Energy, \$20,000
- Dominion Resources, \$10,000
- General Motors, \$5,000
- Philip Morris, USA, \$10,000
- NER: Metal-Coated Boron-Nitride and Boron-Substituted C₆₀ Nanostructures for Hydrogen Storage, National Science Foundation 2007-2008 \$129,970
- Supported, Coated, and Ligated Metal Clusters, Department of Energy 2008-2011 \$585,000
- Complex Hydrides—A New Frontier for Future Energy Applications, Ames Laboratory, Department of Energy 2008-2011 \$270,000
- Molecular Modeling of Metal Nanostructures for Hydrogen Storage, Savannah River National Laboratory, Department of Energy 2008-2011 \$135,000
- The Search for New High-Energy-Density materials, Defense Threat Reduction Agency (DTRA) 2009-2012 \$600,000
- Nano-Structured Materials for High Energy-Density Applications, Defense Threat Reduction Agency (DTRA) 2010-2013 \$522,360
- Superhalogens and beyond-Bare & Supported Clusters (DOE) 2011-2014 \$606,000
- Elucidation of Hydrogen Interaction Mechanisms with Metals (DOE) 2011-2014 \$225,000
- International Symposium on Clusters and Nanostructures, Richmond, VA (NSF, DOE, Afton, VCU) 2011-2012 \$ 100,000
- Atomic Clusters- Bare, Coated and Supported (DOE) 2014-2017 \$ 615,000
- Elucidation of Hydride Interaction Mechanisms with Carbon Nanostructures and the Formation of Novel Nanocomposites, (DOE) 2014-2017 \$ 225,000
- Toward A New Generation of Rechargeable Batteries (Presidential Research Quest Fund) 2014-2015 \$ 50, 000
- Commonwealth Research & Development Fund (CRDF) 2015-2016 \$100,000
- International Symposium on Clusters and Nanomaterials (Department of Energy) 2015-2016 \$ 20, 000
- (Virginia Commonwealth Univ.) 2015-2016 \$ 55, 000
- (National Science Foundation) 2015-2016 \$ 20, 000
- (Toyota Research Laboratories) 2015-2016 \$ 1, 500

X. Teaching

I have more than 37 years of experience in teaching. I enjoy teaching and consider it to be a rewarding experience. I have taught physics at all levels - starting with Conceptual Physics at the most elementary level to General Physics to Pre-medical students to advanced Physics courses to undergraduate and graduate students. My instructor rating in all of these courses are among the highest in the college, ranging between 4.5 and 5.0 on a maximum 5.0 scale. Following is a list of courses I have taught.

- Concepts in Physics
- General Physics
- General Physics Lab.
- University Physics
- Modern Physics
- Introduction to Solid State Physics
- Introduction to Quantum Mechanics
- Fundamentals of Energy Band Theory
- Mathematical Methods of Physics
- Classical Mechanics
- Theoretical Mechanics
- Advanced Solid State Physics
- Advanced Quantum Mechanics
- Structure and Bonding: From Atoms to Bulk
- Theoretical Methods in Nanoscience

XI. BIBLIOGRAPHY

Total publications [12 edited books, 14 review articles/book chapters, 480 original papers (including those submitted) in peer reviewed journals, 50 publications in refereed conference proceedings, 2 reports, and 1 patent]
 h-index: 61, Total Citations ~ 14,000; Google Scholar, h-index: 69, Total Citations ~ 19,000

A. Books: (Edited Conference Proceedings)

1. Jena, P. and Satterthwaite, C.B.: Editors, Electronic Structure and Properties of Hydrogen in Metals, Plenum (1983).
2. Jena, P., Rao, B.K., and Khanna, S.N.: Editors, Physics and Chemistry of Small Clusters, Plenum (1987).
3. Jena, P., Kalia, R., Tosi, M.P., and Vashishta, P.: Editors, "Correlations in Electronic and Atomic Fluids", World Scientific Publications, (1990).
4. Jena, P., Khanna, S.N., and Rao, B.K.: Editors, Physics and Chemistry of Finite Systems - From Clusters to Crystals, Kluwer Academic Press, Vol. I and II, (1992).
5. Mahanti, S.D., and Jena, P.: Editors. Local Order in Condensed Matter Physics, Nova Scientific Publishers, (1995).
6. Jena, P. and Behera, S.: Editors, Clusters and Nanostructured Materials, Nova Scientific Publishers, New York, (1996).
7. Jena, P., Khanna, S.N., and Rao, B.K.: Editors, Science and Technology of Atomically Engineered Materials, World Scientific Publications, Singapore, (1996).
8. Jena, P., Khanna, S.N., and Rao, B.K.: Editors, Cluster and Nanostructure Interfaces, World Scientific Publishing, Singapore, (2000).
9. Jena, P., Khanna, S. N., and Rao, B. K.: Editors, Clusters and Nano-Assemblies: Physical and Biological Systems. World Scientific Publishing, Singapore, (2005).
10. Sahu, S. N., Choudhury, R. K., and Jena, P.: Editors, Nano-Scale Materials: From Science to Technology, Nova Science Publishers, Inc., NY (2006).
11. Jena, P., Kandalam, A. K., and Sun, Q.: Editors, Materials Issues in a Hydrogen Economy, World Scientific Publications, Singapore, (2009).
12. Jena, P. and Castleman, Jr., A. W.: "Nanoclusters – A Bridge across Disciplines", Elsevier (2010)

B. Review Articles/Book Chapters:

1. Jena, P.: Electronic structure of hydrogen like impurities in nearly-free electron metals. *Hyperfine Int.* 6, p. 5 (1979).
2. Jena, P.: Electronic structure of point defects in metals in *Treatise on Materials Science and Technology, Vol. 21.*, ed. by F.Y. Fradin, Academic Press p. 351-425 (1981).
3. Jena, P.: Electronic structure of decorated defects in metals in *Materials Research Forum: Modern Methods in Material Science*, ed. by M. J. Fluss and Y. C. Jean, Trans Tech Publications, Inc., Switzerland, p. 27-47 (1984).
4. Rao, B.K., Khanna, S.N., and Jena, P.: Clusters - A new phase of matter, *Phase Transitions* 24-26, p. 35 (1990).
5. Jena, P.: Electronic Structure and Stability of Hydrogen Pairing in Metals, in *"Correlations in Electronic and Atomic Fluids"*, eds. P. Jena, R. Kalia, M. P. Tosi, and P. Vashishta, World Scientific Publications, p. 239 (1990).
6. Baskes, M.I., Birnbaum, H.K., Corbett, J.W., DeLeo, G.C., Estreicher, S.K., Haller, E.E., Jena, P., Johnson, N.M., Kirchheim, R., Myers, S.M., Pearson, S.J., and Stavola, M.J.: Hydrogen Interactions with Defects in Solids, *Rev. Mod. Phys.* 64, 559 (1992).
7. Jena, P., Khanna, S.N., and Rao, B.K.: Clusters and Cluster Reactions in *"Electronic Density Functional Theory of Molecules, Clusters and Solids"*, Ed. D.E. Ellis, Kluwer Academic Publishers, Dordrecht, p.123 (1994).
8. Jena, P., Khanna, S.N., and Rao, B.K.: Stability and Electronic Structure of Cluster Assembled Materials in *Cluster Assembled Materials*, ed. K. Sattler, Trans Tech Publications Inc., Zürich, p. 1 (1996).
9. Jena, P., Khanna, S.N., and Rao, B.K., Physics of Clusters and Cluster Assemblies in *Atomic Clusters*, ed. J. Jellinek, Springer Verlag, Heidelberg, p. 27 (1999).
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 47. Jena, P., Khanna, S. N., Rao, B. K., Sun, Q., and Wang, Q.: "Design of Novel Silicon nanostructures", Nova Science Publishers, eds. M. Belkacem and P. M. Dinh, New York, p. 83, (2005).
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 49. Li, S. and Jena, P.: "Dehydrogenation from Ti-activated Sodium Alanate" in *Materials Issues in a Hydrogen Economy*, eds. P. Jena, A. K. Kandalam, and Q. Sun, World Scientific (2009) p. 102.
 50. Sun, Q., Wang, Q., and Jena, P.: "Computational Design of Nanomaterials for Hydrogen Storage" *Materials Issues in a Hydrogen Economy*, eds. P. Jena, A. K. Kandalam, and Q. Sun, World Scientific (2009) p. 244.

E. Reports:

- Basic Energy needs for the Hydrogen Economy: report of the basic Energy Sciences Workshop on Hydrogen Production, Storage, and Use, May 13-15, 2003. M. Dresselhaus, G. Crabtree, M. Buchanan, T. Mallouk, L. Mets, K. Taylor, P. Jena, F. DiSalvo, and T. Zawodzinski; <http://www.sc.doe.gov/bes/hydrogen.pdf>.
- Washington International Renewable Energy Conference Report, March 4-6, 2008, Editors: P. Jena and S. Specht

F. Patents

Cigarette Filter Using Intermetallic Compounds Inventors: A. C. Lilly, K. B. Koller, J. B. Paine, III, P. Jena, and B. K. Rao, US Patent # US 6,848,450 B2 issued February 1, 2005

XII. INVITED TALKS

A. International Conferences

- | | | |
|---|-------------|------|
| • International Conferences on Muon Spin Rotation | Switzerland | 1978 |
| • International Conferences on Muon Spin Rotation | Japan | 1978 |
| • Symposium on "Application of Modern Nuclear | | |

Methods to Materials Science" in the annual meeting of the American Chemical Society	USA	1983
• International Symposium on "Current Trends in Physics"	India	1986
• International Workshop on Condensed Matter Theories, Argonne, IL	USA	1986
• NEC Symposium on Microclusters, Tokyo	Japan	1986
• Annual Meeting of the AIME, Orlando, FL	USA	1986
• Workshop on Atoms, Molecules, and Solids, Trieste	Italy	1987
• SURA Materials Research Workshop, Atlanta, GA	USA	1987
• Sanibel Symposium, Sanibel, FL	USA	1988
• Virginia Academy of Sciences Annual Meeting	USA	1989
• International Symposium on "Highlights in Condensed Matter Physics,"	Italy	1989
• Gordon Conference on Metal Hydrides, South Hadley, MA	USA	1989
• TMS Annual Meeting on Interfaces in Metal Ceramic Composites	USA	1990
• March Meeting of the American Physical Society	USA	1990
• DOE Panel on "Fundamental Issues in Hydrogen Materials Interaction", San Diego, CA	USA	1990
• International Conference on "Low Density Metals", Trieste	Italy	1990
• International Conference on "Condensed Matter Physics in the 21st Century", Stockholm	Sweden	1990
• International Symposium on "Metal-Hydrogen Systems", Banff	Canada	1990
• Fall Meeting of the Materials Research Society - "Clusters and Cluster- Assembled Materials", Boston, MA	USA	1990
• Chinese Materials Research Society, Beijing (declined)	P.R. China	1990
• International Conference on Recent Progress in Many Body Theories, Minneapolis, MN	USA	1991
• Army Research Office Workshop on Atomic Clusters, Research Triangle Park, NC	USA	1991
• International Conference on Atomic and Nucleonic Clusters, Turku (declined)	Finland	1991
• U.S./Japan Workshop on "Novel Micro-cluster Assemblies", University of Maryland, College Park, MD	USA	1991
• East Coast Symposium on the Physics and Chemistry of Clusters, John Hopkins University, Baltimore, MD	USA	1991
• International Conference on "Clusters and Fullerenes", Trieste	Italy	1992
• American Chemical Society meeting, Washington D.C.	USA	1992
• IX-NACMP Meeting, Bombay (declined)	India	1992
• International Symposium on "Local Order in Condensed Matter Physics", Jekyll Island, GA	USA	1993
• International Workshop on Ultrafine Particles and Nanostructured Materials, Stockholm	Sweden	1993
• NATO Advanced Study Institute on Nanophase Materials, Corfu	Greece	1993
• International Symposium on Atomic and Nucleonic Clusters, Santorini	Greece	1993

• 3rd International Summer School (a series of 10 lectures on clusters), Jyvaskyla	Finland	1993
• International Union of Materials Research Society Meeting, Tokyo	Japan	1993
• International Conference on Hydrogen in Metals, Yalta (declined)	Ukraine	1993
• International Conference on Current Trends in Physics, Bombay (declined)	India	1993
• International Conference on Nanophase Materials, Davos	Switzerland	1994
• March Meeting of the American Physical Society, Pittsburgh, PA	USA	1994
• First Russian Conference on Clusters, St. Petersburg (declined)	Russia	1994
• VII International Symposium on Small and Inorganic Clusters, Kobe	Japan	1994
• International Workshop on Clusters and Nanostructure Materials, Puri	India	1994
• Workshop on Metallic Clusters, Trento	Italy	1995
• School on Magnetism in Finite Systems (6 lectures), Stockholm	Sweden	1995
• NATO ASI on Large Clusters of Atoms & Molecules, Erice	Italy	1995
• NATO ASI on Stability of Materials, Corfu	Greece	1995
• International Symposium on Metastable, Mechanically Alloyed & Nanocrystalline Materials, Quebec	Canada	1995
• International Conference on Advanced Materials (two talks), Cancun	Mexico	1995
• International Workshop on Cluster Science and Atomic Engineering, Nan Daihe	P.R. China	1995
• International Conference on Granular and Nanostructured Materials, Sendai	Japan	1995
• International Symposium on the Science and Technology of Atomically Engineered Materials, Richmond, VA	USA	1995
• Workshop on Magnetic Nanostructures on Metal and Semiconductor Surfaces, Halle	Germany	1996
• 70th Colloid and Surface Science Symposium, Potsdam, NY	USA	1996
• Workshop on Density Functional Theory and Condensed Matter Systems (4 lectures), Stockholm	Sweden	1996
• International Conference on Theory of Atomic and Molecular Clusters, Fontana, WI	USA	1996
• International Conference on Frontiers in Materials Modelling and Design, Kalpakam	India	1996
• International Aerosol Symposium, Moscow	Russia	1996
• International Workshop on Novel Materials, Puri	India	1997
• March Meeting of the American Physical Society, Kansas City, MO	USA	1997
• Summer School on Science at the Atomic Scale, (4 lectures) KTH, Stockholm	Sweden	1997
• Magnetic Properties of Oxides and Their Surfaces, Halle	Germany	1997
• International Conference on Nanostructured Materials, Stockholm	Sweden	1998
• Workshop on Atomic Clusters, Seattle, WA	USA	1998

• International Materials Research Congress, Cancun	Mexico	1998
• International Union of Materials Research Society, Bangalore	India	1998
• Ninth International Symposium on Physics of Materials, Guilin	P.R. China	1998
• Tenth International Conference on Rapidly Quenched Metals, Bangalore	India	1999
• Solid States Physics Symposium, Kalpakam	India	1999
• ASM International - Intermetallics, Cincinnati, OH	USA	1999
• International Workshop on Applied Aspects of Interface Science, St. Petersburg	Russia	1999
• International Materials Research Congress, Cancun	Mexico	1999
• American Chemical Society, Knoxville, TN	USA	1999
• Frontiers in Magnetism, Stockholm	Sweden	1999
• International Conference on Interface Controlled Materials Research and Design, St. Petersburg (declined)	Russia	2000
• International Workshop on Materials Design By Computer Simulation at Atom and Electron Level, Sendai	Japan	2000
• International Materials Research Congress, Cancun	Mexico	2000
• 4 th Sino-German Symposium in Solid State Physics, Shanghai	P.R. China	2000
• International Chemical Congress of Pacific Basin Societies, Honolulu, HI	USA	2000
• India and Abroad: Research Perspectives and Projections in Condensed Matter Physics, Calcutta	India	2001
• International Conference on Science and Technology of Nanostructured Materials, Puri	India	2001
• Science and Engineering Research Council School on Surfaces, Interfaces, and Clusters, Calcutta	India	2001
• International Workshop on Nano-Materials, Calcutta (declined)	India	2001
• International Conference on Applied Statistical Physics Molecular Engineering, Cancun	Mexico	2001
• First Asian Consortium on Computational Materials Science, Bangalore (declined)	India	2001
• Twenty-fifth International Workshop on Condensed Matter Theories, Canberra (declined)	Australia	2001
• International Conference on Physics at Surfaces and Interfaces, Puri (declined)	India	2002
• European Workshop on Switchable Metal-Hydride Films, Mallorca	Spain	2002
• International Symposium on Novel Materials: From Clusters to Nano-Assemblies, Jekyll Island, GA	USA	2002
• International Workshop on Condensed Matter Theories, Luso	Portugal	2002
• International Conference on Alternative Substrate Technology, Cancun	Mexico	2002
• Inaugural Address, Center for Computational Nano-science, Martin Luther University	Germany	2002
• Chemical Physics Workshop, Knoxville, TN	USA	2003
• The Metallurgical Society, San Diego, CA	USA	2003
• Asian Consortium on Computational Materials Science, Beijing (declined)	P.R. China	2003

• Molecular Engineering and Statistical Physics, Puerto Vellarta	Mexico	2003
• Condensed Matter Theory - 27, Toulouse	France	2003
• Molecular Electronics, Shanghai (declined)	P.R. China	2003
• American Chemical Society, New York, NY	USA	2003
• Fundamental Properties of Hydrogen in Metals, Uppsala	Sweden	2003
• 5 th Philip Morris Symposium Richmond, VA	USA	2003
• DURINT Workshop, Pittsburgh, PA	USA	2003
• Southeastern Section of the American Physical Society, Wilmington, NC	USA	2003
• Novel Materials, Kolkata	India	2004
• Alternate Substrate Technology, Chamonix (Declined)	France	2004
• American Chemical Society, Anaheim, CA	USA	2004
• Indo-US Workshop on Nano-scale Materials: From Science to Technology, Puri	India	2004
• Durint Workshop, Tampa, FL	USA	2004
• International Symposium on Small Particles and Inorganic Clusters, Nanjing	P. R. China	2004
• ASM International Meeting, Columbus, OH	USA	2004
• Materials Research Society, Boston, MA	USA	2004
• Symposium on Size Selected Clusters, Brand	Austria	2005
• American Chemical Society, San Diego, CA	USA	2005
• BCC Conference on Nano-technology, New York, NY	USA	2005
• International Symposium on Metastable and Nano Materials (ISMANAM), Paris	France	2005
• IPS Meeting, Chicago, IL	USA	2005
• International Conference on Composites and Nano Engineering, Canary Islands	Spain	2005
• American Chemical Society, Washington DC	USA	2005
• Third Conference of the Asian consortium for Computational Materials Science, Beijing	P. R. China	2005
• WE-Heraeus-Seminar on Hydrogen Storage With Novel Nanomaterials, Bad Honnef	Germany	2005
• Department of Atomic Energy Conference, Mumbai	India	2005
• Pacificchem 2005, Honolulu, HI	USA	2005
• American Physical Society, Baltimore, MD	USA	2006
• The Metallurgical Society, San Antonio, TX	USA	2006
• International Symposium on Materials Issues in Hydrogen Generation and Storage, Santa Barbara, CA	USA	2006
• Workshop of Asian Consortium of Computational Materials Science, Sendai	Japan	2006
• American Chemical Society, San Francisco, CA	USA	2006
• Nordic Workshop on Low-dimensional Physics, Jyvaskyla	Finland	2006
• International Conference on Materials Chemistry, Mumbai	India	2006
• Indo-Sweden Conference on Magnetic Nanostructures, Kolkata	India	2007
• Asian Consortium of Computational Materials Science, Sendai	Japan	2007
• Symposium on Size Selected Clusters, Brand	Austria	2007
• Symposium on Hydrogen Storage Materials, Miami, FL	USA	2007
• Workshop on Nano Magnetic Materials – Challenges and		

Future Prospects, Leiden	Netherlands	2007
• International Conference on Materials and Technology	Singapore	2007
• Gordon Conference on Clusters, South Hadley, MA	USA	2007
• Swedish-Brazilian Workshop on Advanced Functional Materials	Brazil	2007
• International Conference on Advanced Materials, Bangalore	India	2007
• Computational Materials Science Network, Ames, IA	USA	2007
• International Workshop on Mesoscopic, Nanoscopic, and Microscopic Materials, Bhubaneswar	India	2008
• Asian Consortium on Computational Materials Science, Sendai	Japan	2008
• Indo-US Workshop on Science and technology at the Nano-Bio Interface, Bhubaneswar	India	2008
• International Symposium on Materials Innovations in an Emerging H ₂ Economy, Cocoa Beach, FL	USA	2008
• DOE Contractors' Meeting on Physical behavior of Materials Warrenton, VA	USA	2008
• US – North Africa Regional Workshop on Nanostructured Materials and Nanotechnology, Tunis	Tunesia	2008
• Symposium on Hydrogen Storage Materials, Uppsala	Sweden	2008
• Conference on Renewable Energy and Energy Security	Chile	2008
• Complex and Nanostructured Materials for Energy Applications, East Lansing, MI	USA	2008
• National Conference on Advanced Materials, Vellore	India	2008
• American Chemical Society, Little Rock, AR	USA	2008
• Computational Materials Science Network, Gatlinburg	USA	2008
• AsiaNano2008 Conference	Singapore	2008
• International Conference on Electrochemical Power Systems, Thiruvanthapuram	India	2008
• International Symposium on Materials Chemistry, Mumbai	India	2008
• GRI Symposium on Cluster Reactions, Nagoya	Japan	2009
• March Meeting of the American Physical Society, Pittsburgh	USA	2009
• Workshop on High Energy Density Materials, Indian Head, MD	USA	2009
• Power and Energy Workshop, Valparaiso	Chile	2009
• Commonwealth NanoScience Workshop, Charlottesville, VA	USA	2009
• American Chemical Society, Washington DC	USA	2009
• Interaction Among Nanostructures,	St. Thomas	2009
• 5 th Conference of the ACCMS, Hanoi (key note)	Vietnam	2009
• European School on Computational Nanoscience for Renewable Energy Systems, Helsinki,	Finland	2009
• Computational Materials Science Network Conference, Denver	USA	2009
• 2 nd International Conference on Energy, Logistics, and the Environment, Las Vegas	USA	2009
• 4 th ACCMS-VO workshop, Sendai	Japan	2010
• American ceramic Society - Materials Challenges in Alternative & Renewable Energies, Cocoa Beach, Florida	USA	2010
• US-Egypt Advanced Study Institute on “Nanomaterials and Nanocatalysis for Energy, Petrochemicals, and Environmental Applications, Cairo	Egypt	2010
• US-Russia Experts' Meeting on Nanoscience-Energy,		

	Washington DC	USA	2010
•	International Center for Quantum Structures, Beijing	China	2010
•	Gordon Conference on Energetic Materials, Tilton	USA	2010
•	International Workshop on Cluster-Surface Interaction, Stratford	UK	2010
•	Simulations and Experiments on Materials for Hydrogen Storage, Dublin	Ireland	2010
•	Current Trends in Condensed Matter Physics Workshop, Bhubaneswar	India	2010
•	Presidential USA-Russia Bilateral Commission, Moscow	Russia	2011
•	Size Selected and Supported Clusters, Davos	Switzerland	2011
•	Collaborative Conference on 3D & Materials Research, Jeju Island	South Korea	2011
•	Asian Consortium on Computational Materials Science	Singapore	2011
•	India Science Exhibition-Khoj, Mumbai	India	2011
•	SERMACS, Richmond	USA	2011
•	QuimiUNAM, Mexico City	Mexico	2011
•	International Conference on Functional Materials, Berhampur	India	2011
•	GRI Symposium III on Cluster Science, Nagoya	Japan	2012
•	Materials in Renewable Energy, Clearwater, Florida	USA	2012
•	Materials genome: Simulation, Synthesis, Characterization, Manufacturing, Terranea Resort	USA	2012
•	Gordon Conference on High Energy Density Materials, Vermont	USA	2012
•	CECAM Workshop on Theoretical Challenges in Clusters, Lausanne	Switzerland	2012
•	ISSPIC, Leuven	Belgium	2012
•	68 th Southwest Regional ACS Meeting, Baton Rouge, LA	USA	2012
•	American Chemical Society, Philadelphia	USA	2012
•	ACCMS-VO, Sendai	Japan	2012
•	Indian Science Congress, Kolkata	India	2013
•	Electronic Structure Methods of Atoms, Clusters, and Crystals, Hyderabad	India	2013
•	Symposium on Size Selected Clusters, Davos	Switzerland	2013
•	International Conference on Materials under Extreme Conditions Miami	USA	2013
•	Energy Investment Forum, San Francisco	USA	2013
•	First International Workshop on Theoretical and Computational Physics, Da Nang	Vietnam	2013
•	International Conference on Current Trends in Theoretical Chemistry, Mumbai	India	2013
•	International Symposium on Nanomaterials for Renewable Energy, Beijing	China	2013
•	8 th International Symposium on Hydrogen & Energy, Guangzhou,	China	2014
•	International Workshop on Nano-materials and Nano-technology Applied to Energy", Moulay Ismail Univ., Meknes	Morocco	2014
•	International Conference on Cluster-Surface Interaction Villa Cagnola,	Italy	2014
•	International Conference on 6 th Forum on New Materials, Montecatini	Italy	2014

• CECAM Workshop on Nanostructured ZnO and Related Materials, Bremen	Germany	2014
• Workshop on “Fundamental Physics of Ferroelectrics and Related Materials”, Knoxville	USA	2015
• International Conference on Current Trends in Condensed Matter Theory, Bhubaneswar	India	2015
• International Symposium on “Clusters: from trimers to nanoparticles”, Athens	Greece	2015
• Annual World Congress of Advanced Materials, Chongqing	China	2015
• “Advances in Modeling of Nano Materials” Conference, Hefei	China	2015
• Asian Consortium on Computational Materials Science-8, Taipei	Taiwan	2015
• Gordon Conference on Metal-Hydrogen Systems	USA	2015
• Computers in Scientific Discovery-7, Richmond, VA	USA	2015
• E-MRS-Materials for energy storage and conversion, Warsaw	Poland	2015
• South Eastern Section of the American Chemical Society, Memphis	USA	2015
• Advances in Chemistry and Materials for Hydrogen Storage PACIFICHEM, Honolulu	USA	2015
• Frontiers of Metal Clusters and Nanostructures: From Fundamental Properties to Functionalities, PACIFICHEM, Honolulu	USA	2015
• Emerging Trends in Advanced Functional Materials, Bhubaneswar	India	2016
• Symposium on Size Selected Clusters, Davos	Switzerland	2016

B. Universities, Industrial and Government Laboratories

• Utkal University	India	1969
• State Univ. of N.Y., Albany, NY	USA	1970
• Univ. of Connecticut, Storrs, CT	USA	1971
• Dalhousie University, Halifax	Canada	1971
• Utkal University, Bhubaneswar	India	1972
• I. I. T. Kanpur	India	1972
• Univ. of Warwick, Coventry	England	1972
• Delhi Univ., Delhi	India	1972
• Western Washington University, Bellingham, WA	USA	1973
• Univ. of British Columbia, Vancouver	Canada	1973
• Univ. of South Florida, Tampa, FL	USA	1974
• Cleveland State Univ., Cleveland, OH	USA	1974
• Univ. of Cincinnati, Cincinnati, OH	USA	1974
• Pennsylvania State Univ., Univ. Park, PA	USA	1975
• Univ. of Illinois, Chicago, IL	USA	1975
• Univ. of Uppsala, Uppsala	Sweden	1976
• Institute of Physics, Goteborg	Sweden	1976
• Max Planck Institute, Stuttgart	Germany	1976
• S. I. N., Villigen	Switzerland	1976
• Atomic Energy Comm., Harwell	England	1976
• Univ. of Liverpool, Liverpool	England	1976
• Argonne National Lab, Argonne, IL	USA	1977
• North Dakota State Univ., Fargo, ND	USA	1977

• Firestone Tire Co., Akron, OH	USA	1977
• Michigan Tech. Univ., Houghton, MI	USA	1977
• Bell Telephone Lab, Murray Hill, NJ	USA	1978
• Argonne National Lab, Argonne, IL	USA	1978
• Hochschule der Bundeswehr, Neubiberg	Germany	1978
• Kernforschungsanlage, Julich	Germany	1978
• Univ. of Cincinnati, Cincinnati, OH	USA	1978
• Ford Motor Company, Dearborn, MI	USA	1979
• Michigan State Univ., East Lansing, MI	USA	1979
• Marquette Univ., Milwaukee, WI	USA	1979
• Chuo University, Tokyo	Japan	1979
• Univ. of Kyoto, Kyoto	Japan	1979
• Nagoya University, Nagoya	Japan	1979
• Michigan Tech. Univ., Houghton, MI	USA	1979
• Virginia Commonwealth Univ., Richmond, VA	USA	1979
• Wayne State Univ., Detroit, MI	USA	1980
• College of William and Mary, Williamsburg, VA	USA	1980
• Virginia Commonwealth Univ., Richmond, VA	USA	1980
• Boston Univ., Boston, MA	USA	1980
• NASA, Langley Research Center, Hampton, VA	USA	1981
• Katolieke Universiteit Leuven	Belgium	1981
• Institute of Physics, Bhubaneswar (a series of 10 lectures)	India	1981
• Tata Institute of Fundamental Research	India	1982
• IFF-KFA, Julich	Germany	1982
• Technischen Universitat, Munchen	Germany	1982
• ETH, Zurich	Switzerland	1982
• Westfallische Wilhelms Universitat, Munster	Germany	1982
• Vrije Universiteit, Amsterdam	Netherlands	1982
• Virginia State Univ., Petersburg, VA	USA	1983
• NORDITA, Copenhagen	Denmark	1983
• Chalmers Institute of Technology, Göttenberg	Sweden	1983
• Univ. of Uppsala, Uppsala	Sweden	1984
• Tsinghua Univ., Beijing (a series of 14 lectures at the invitation of the Ministry of Education)	P.R. China	1984
• University of Tokyo	Japan	1984
• University of Jyväskylä	Finland	1985
• University of Konstanz	Germany	1985
• University of Zurich	Switzerland	1985
• BDM Corporation, McLean, VA	USA	1985
• Vanderbilt Univ., Nashville, TN	USA	1985
• Naval Research Laboratory Washington, D.C.	USA	1986
• Univ. of Virginia, Charlottesville, VA	USA	1986
• Symposium on Metal Clusters, Heidelberg	Germany	1986
• Univ. of Cincinnati, Cincinnati, OH	USA	1986
• Purdue Univ., West Lafayette, IN	USA	1987
• Univ. of South Florida, Tampa, FL	USA	1987
• Michigan State Univ., East Lansing, MI	USA	1987
• Northwestern Univ., Evanston, IN	USA	1987

• Univ. of Rhode Island, Kingston, RI	USA	1987
• Stanford Univ., Stanford, CA	USA	1987
• International Center for Theoretical Physics (a series of 3 lectures), Trieste	Italy	1987
• Institute of Physics, Bhubaneswar	India	1988
• University of Konstanz	Germany	1988
• Universidad Autonoma de Madrid	Spain	1988
• Universidad de Valladolid	Spain	1988
• C. E. N., Saclay	France	1988
• State Univ. of N.Y., Albany, NY	USA	1989
• Washington State Univ., Pullman, WA	USA	1989
• Michigan State Univ., East Lansing, MI	USA	1989
• University of Richmond, Richmond, VA	USA	1989
• University of Nebraska, Lincoln, NE	USA	1989
• University of California, Riverside, CA	USA	1990
• University of Texas, Dallas, TX	USA	1990
• University of Maryland, College Park, MD	USA	1990
• North Carolina State University, Raleigh, NC	USA	1991
• Vanderbilt University, Nashville, TN	USA	1991
• Institute of Physics, Bhubaneswar	India	1992
• Univ. of Texas at Arlington, Arlington, TX	USA	1992
• Univ. of Texas at Dallas, Dallas, TX	USA	1992
• Univ. of Houston, Houston, TX	USA	1992
• Royal Institute of Technology (a series of 10 lectures), Stockholm	Sweden	1992
• Technische Huchschule, Darmstadt	Germany	1992
• Michigan Technological Univ., Houghton, MI	USA	1992
• Univ. of Kentucky, Lexington, KY	USA	1992
• College of William & Mary, Williamsburg, VA	USA	1993
• Univ. of Manitoba, Winnipeg	Canada	1993
• University of Helsinki	Finland	1993
• Chuo University, Tokyo	Japan	1993
• University of Tokyo, Tokyo	Japan	1993
• University of Konstanz	Germany	1994
• Royal Institute of Technology, Stockholm	Sweden	1994
• University of Alabama, Birmingham, AL	USA	1994
• Virginia Tech, Blacksburg, VA	USA	1994
• North Carolina State Univ., Raleigh, NC	USA	1994
• Oak Ridge National Laboratory, Oak Ridge, TN	USA	1994
• University of Texas, Dallas, TX	USA	1994
• University of Texas, Arlington, TX	USA	1994
• University of Kyoto	Japan	1994
• Yamaguchi University, Ube	Japan	1994
• Saha Institute of Nuclear Physics	India	1995
• University of Hawaii at Manoa, Manoa, HI	USA	1995
• University of Connecticut, Storrs, CT	USA	1995
• IFF-KFA, Julich	Germany	1995
• Max-Planck Institute, Halle	Germany	1995
• ETH, Zürich	Switzerland	1995

• University of Rome, Rome	Italy	1995
• ININ, Mexico City	Mexico	1996
• Vanderbilt University, Nashville, TN	USA	1996
• University of California, Santa Barbara, CA	USA	1996
• Saha Institute of Nuclear Physics	India	1997
• California State University, Northridge, CA	USA	1997
• C.N.R.S., Orsay	France	1997
• Osram Sylvania, Inc., Beverly, MA	USA	1997
• Frei University, Berlin Germany		1998
• Technical University, Dresden	Germany	1998
• Charles University, Prague	Czech Republic	1998
• University of Turku, Turku	Finland	1998
• Bose Institute, Calcutta	India	1998
• F.M. College, Balasore	India	1999
• University of New Hampshire, Durham, NH	USA	2000
• ININ, Mexico City	Mexico	2000
• University of Guanajuato	Mexico	2000
• Chinese Academy of Science, Institute Of Physics, Beijing	P.R. China	2000
• Tsinghua University, Beijing	P.R. China	2000
• Fudan University, Shanghai	P.R. China	2000
• University of Texas at Dallas, Dallas, TX	USA	2001
• Vanderbilt University, Nashville, TN	USA	2001
• University of Tennessee, Knoxville, TN	USA	2001
• University of Virginia, Charlottesville, VA	USA	2002
• Consejo Superior de Investigaciones Cientificas, Madrid	Spain	2002
• Institut de Ciencia de Materials de Barcelona	Spain	2002
• University of Illinois, Chicago, IL	USA	2002
• University of Missouri, Kansas City, MO	USA	2002
• Washington University, St. Louis, MO	USA	2002
• Max Planck Institute for Micro-Physics, Halle	Germany	2002
• University of Central Florida, Orlando, FL	USA	2003
• National University of Singapore	Singapore	2003
• Saha Institute of Nuclear Physics, Kolkata	India	2003
• F.M. College, Balasore	India	2003
• University of Cincinnati, Cincinnati, OH	USA	2004
• University of Richmond, Richmond, VA	USA	2004
• University of Xian, Xian	P. R. China	2004
• University of Uppsala, Uppsala	Sweden	2004
• University of Texas, Arlington, TX	USA	2004
• Harvard University, Cambridge, MA	USA	2004
• University of Hawaii, Manoa, HI	USA	2005
• EMPA, Zurich	Switzerland	2005
• University of Illinois, Chicago, IL	USA	2005
• Indian Institute of Science, Bangalore	India	2005
• David Hare Professorship Lecture, IACS, Kolkata	India	2005
• University of Nebraska, Lincoln, NE	USA	2006
• Johns Hopkins University, Baltimore, MD	USA	2006
• Chalmers University of Technology, Goteborg	Sweden	2006

• Argonne National Laboratory, Argonne, IL	USA	2006
• University of California, Riverside, CA	USA	2006
• California State University, Northridge, CA	USA	2006
• University of Konstanz, Konstanz	Germany	2006
• Hampton University, Hampton, VA	USA	2006
• Saha Institute of Nuclear Physics, Kolkata	India	2007
• University of Utah, Salt Lake City, UT	USA	2007
• University of Illinois, Chicago, IL	USA	2007
• Foreign Service Institute, Arlington, VA	USA	2007
• Johns Hopkins University, Baltimore, MD	USA	2007
• University of Maryland, College Park, MD	USA	2007
• Foreign Service Institute, Arlington, VA	USA	2008
• University of Iceland, Reykjavík	Iceland	2008
• Virginia State University, Petersburg	USA	2009
• University of Texas, Arlington	USA	2009
• University of Texas, Dallas	USA	2009
• George Mason University, Fairfax	USA	2009
• University of Maryland, College Park	USA	2009
• Foreign Service Institute, Arlington, VA	USA	2009
• University of Jyväskylä, Jyväskylä	Finland	2009
• Foreign Service Institute, Arlington, VA	USA	2009
• University of Tennessee, Knoxville	USA	2009
• Distinguished Jefferson Lecture, Department of State, Washington DC	USA	2009
• Toyota Institute of Technology, Tokyo	Japan	2010
• University of Tennessee, Knoxville	USA	2010
• Oak Ridge National Laboratory, Oak Ridge	USA	2010
• Peking University, Beijing	China	2010
• Institute of Solid State Physics, Heifei	China	2010
• Florida International Univ., Miami	USA	2010
• University of Uppsala, Uppsala	Sweden	2010
• S. N. Bose National Institute, Kolkata	India	2010
• EMPA, Dübendorf	Switzerland	2011
• Johns Hopkins University, Baltimore	USA	2011
• Foreign Service Institute, Arlington	USA	2011
• Reliance Corporation, Mumbai	India	2011
• Indian Institute of Technology, Mumbai	India	2011
• University of Hyderabad, Hyderabad	India	2011
• Jawaharlal Nehru University, New Delhi	India	2011
• University of Tennessee, Knoxville	USA	2012
• Foreign Service Institute, Arlington	USA	
• Peking University, Beijing	China	2012
• Institute of Chemistry, Chinese Academy of Sciences, Beijing	China	2012
• University of Jinan, Jinan	China	2012
• University Chongqing, Chongqing	China	2012
• State University of New York, Albany	USA	2012
• Indian Institute of Technology, Roorkee	India	2012
• Institute of Physics, Bhubaneswar	India	2012

• Hong Kong University of Science and Technology	Hong Kong	2013
• University of Jinan, Jinan	China	2013
• University of Guilin, Guilin	China	2013
• University of Virginia, Charlottesville, VA	USA	2013
• George Mason University, Fairfax, VA	USA	2014
• University of Mary Washington, Fredericksburg, VA	USA	2014
• West Chester University of Pennsylvania, West Chester, PA	USA	2014
• University of Gdansk, Gdansk	Poland	2014
• Max-Planck Institute, Halle	Germany	2014
• Shiv Nadar University, Uttar Pradesh	India	2015
• FORTH:IESL, Crete	Greece	2015
• University of Crete, Crete	Greece	2015
• Peking University, Beijing	China	2015
• University of Lanzhou, Lanzhou	China	2015
• Nanjing University of Science and Technology, Nanjing	China	2015
• China University of Mining and Technology, Beijing	China	2015
• Visva Bharati University, Santiniketan	India	2016
• Shiv Nadar University, Uttar Pradesh	India	2016
• EMPA, Dubendorf	Switzerland	2016