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Personal: Birthdate: March 18, 1951
Birthplace: Bangalore, Karnataka, India
Nationality: U.S. citizen (1986)

Education

Bangalore University Bangalore, Karnataka State, India	1969	Bachelor of Science in Physics (Hons.)
Delhi University, India, Delhi, India	1971	Master of Science in Physics
Indiana University Bloomington, Indiana	1976	Ph.D. in Physics

Professional Positions

University of Kentucky Provost, 2006-present Executive Director, University of Kentucky Research Foundation, 2007- Professor of Physics, 2006-	Lexington, Kentucky
Indiana University Dean, College of Arts and Sciences, 2000-2006 Professor, Department of Physics, 2000-2006	Bloomington, Indiana
University of Miami Dean, College of Arts and Sciences, 1997-2000 Professor, Department of Physics, 1997-2000	Coral Gables, Florida

University of Kentucky**Lexington, Kentucky**

Chair, Department of Physics & Astronomy, 1993- 1997

Associate Dean, College of Arts & Sciences, 1991 -1993

Director of Graduate Studies, Department of Physics, 1987-90

Professor of Physics, 1988- 1997

Associate Professor of Physics, 1982-1988

Assistant Professor of Physics, 1978-1982

University of California, Irvine**Irvine, California**

Research Associate, Department of Physics, 1976-1978

Current Administrative Experience and Select Accomplishments**University of Kentucky****2006 to present**

The University of Kentucky is a land grant university and serves as the state's flagship. It is ranked approximately 35th nationally among public research universities when measured by academic, research, and other measures. As an institution, it is Carnegie Research-Very High. We applied for and received Carnegie designation as Engaged University in Curricular Engagement and Outreach & Partnerships. UK has the full range of medical and professional schools on the campus, being one of only seven universities in the country with such a range of representation of degree programs. UK has just over 27,000 students and an annual budget of \$2.5 billion. The unrestricted academic portion of the budget is approximately \$700 million.

As Provost, I serve as the second ranking executive in the University administration with responsibility for overseeing all academic and research operations. In this position, direct reports to me consist of eighteen deans, including the deans of Medicine and five other health care colleges, and four vice-presidents, including Research, Institutional Effectiveness, Diversity, and Student Affairs. My overarching assignment has been to translate the university's legislative mandate to become a Top 20 public research university by 2020 into practical reality. We have developed a "Business Plan" of metrics, a "gap analysis," and a funding model. As Provost, I led development of the Strategic Plan for implementing the Top 20 aspiration.

Select Significant Accomplishments***Fiscal and Administrative***

- As Provost, I directly manage a budget totaling approximately \$900 million (inclusive of restricted research/contracts).
- Created an Office of Veteran Student Affairs to better support returning military

personnel and their families.

- Absorbed an approximate 10% reduction in state allocation while investing in strategic priorities, particularly undergraduate academic and support programs and multidisciplinary research.
- Created the office of Associate Provost for Faculty Affairs to help improve faculty recruitment and to better support the 2,100 faculty.
- Oversaw searches and the successful recruitment of ten deans, two vice presidents, and the University's first chief information officer.
- Have initiated development of consolidated business centers and lean practices to streamline business processes.

Academic

- As Provost, I have made student success an institutional priority, implementing a so-called "War on Attrition" including enhanced academic advising, and improvements in gateway courses. Through these efforts, the first year retention rate has jumped from 76% to 82% between the 2006 cohort and the 2009 cohort.
- Reorganized and strengthened marketing, recruitment, and admissions; number of applications has increased by more than 20%, and avg. ACT of incoming students has increased from 24.1 to 25.2.
- Organized and shepherded a faculty-led effort to create a new general education curriculum which is slated for full implementation in fall 2011, at a cost of \$5 million annually.
- Instituted a Provost Student Lunch Series to hold conversations with, and solicit input from undergraduate, graduate, and professional students.
- Created a unit within Institutional Research focused on assessment of student learning outcomes.

Research

- During my tenure as Provost, external research awards have risen steadily, exceeding \$330 million in FY10.
- Facilitated establishment of the Kentucky-Argonne Battery Manufacturing Research and Development Center, a collaboration between Argonne National Laboratory, UK, and other partners.
- Led aggressive submission of proposals for ARRA funds, leading to 177 awards in the amount of \$110,596,064.
- Enhanced multidisciplinary research through supporting the creation or growth of the Center for Clinical Translational Science, the Institute for Inter-professional Education and Research, the Tracy Farmer Institute for Sustainability and the Environment, a P-20 Innovation Laboratory, the Center for Poverty Research, and the Center for Research on

Violence Against Women.

- Helped recruit new directors for the Markey Cancer Center, Sanders-Brown Center for Aging, and the Tracy Farmer Institute for Sustainability and the Environment through national searches.
- Led efforts to increase research laboratory space through new construction as well as renovation of existing space.

Diversity and Inclusion

- As Provost, I have prioritized efforts to enhance diversity and inclusion at the University, encompassing students, faculty, and administrators.
- I recommended creation of and managed the successful search for the University's first Vice President for Institutional Diversity.
- In 2009-2010, UK recruited a record number of African American first-year students, reaching 403 students.
- I have overseen the successful recruitment of a more diverse faculty, setting an all-time record for the number of full-time African American faculty in 2009.

Internationalization

- I established an Internationalization Task Force which, working with the American Council on Education Internationalization Laboratory, developed a comprehensive strategic plan which is currently being implemented.
- International applications and study abroad participation have both increased significantly during my tenure.
- During my tenure, we succeeded in establishing a Confucius Institute in collaboration with Shanghai University, with a grant from the Chinese *Hanban*.

External Relations, Engagement, and Development

- The Vice President for Development and I commissioned an audit of the university's development operations with an eye toward increasing post-campaign fundraising. We are implementing steps to professionalize college-based fundraising and to set goals, priorities, and performance expectations.
- I have personally focused on student scholarship fundraising, with an emphasis on disadvantaged groups. An early success has been a unique first generation student support program called the First Scholars Program with funding from the Suder Foundation (which was written up in the Chronicle of Higher Education).
- Provided incentives for faculty participation in community-based research projects.
- Established an Office of Community Engagement to improve town-gown relations, with particular emphasis on the immediate neighborhood of the university.
- Worked closely with the Office of Commercialization and Economic Development to

change university policies as appropriate to help in technology transfer efforts; one example is an entrepreneurial leave policy for faculty engaged in starting up companies.

- I serve on a life sciences industry initiative steering committee of Commerce Lexington (Chamber of Commerce).
- I have worked closely with State legislative committees in steering bills to align with university interests.
- I have given invited presentations at the International Dialogue on Education sponsored by the German-American Fulbright Kommission in Berlin in 2009, and two panel presentations at ACE meetings, as well as an invited lecture at the annual National Conference of BDK, LLP Higher Education Practice in St. Louis, Missouri.
- I just concluded a three year term as a Board member of the National Association of College and University Business Officers (NACUBO), and a two year term as Chair of the Board of the Southeastern Conference Academic Consortium.

Previous Administrative Experience and Select Accomplishments

Indiana University, Bloomington (AAU, Carnegie Research-Very High; 29,000 undergraduate and 9,000 graduate/professional students), as Dean of Arts & Sciences [2000-2006] I was the chief academic and administrative officer of the College of Arts and Sciences (65 departments and programs; 775 full-time faculty; 9,000 undergraduate and 3000 graduate students, annual direct expenditure budget of approximately \$175 million). IU operates under a responsibility-centered, decentralized fiscal system, and the academic schools are very autonomous. Significant accomplishments of the College during my stewardship: stabilized enrollment, nearly doubled grants and contracts, began two major research laboratory construction projects, started several new undergraduate programs (e.g., International Studies, Biotechnology), established new research institutes (e.g., Arts & Humanities, 18th Century Studies, Biocomplexity, Functional MRI), set up collaborative degree programs (B.S./MBA; B.S./J.D.); increased graduate financial support, increased diversity of faculty, improved industrial and corporate relations, increased fundraising (raised more than \$120 million per IU Foundation records).

University of Miami, Coral Gables (Private, Carnegie Research Extensive) as Dean of the College of Arts and Sciences [1997-2000] (17 departments, 310 full-time faculty, 3300 undergraduate majors, 500 graduate students, annual budget of approximately \$37 million) I was the chief academic and administrative officer of the largest academic unit. The University has a rather decentralized administrative philosophy, and each college and school is fairly autonomous. Immediately upon my arrival I began a year-long comprehensive strategic planning process. Initiatives undertaken: improved recruitment of high ability undergraduate students; initiated

curriculum review with emphasis on interdisciplinary programs; adopted rational faculty workload policies; improved academic advising; enhanced research infrastructure; and set up a professional advancement effort.

As Chair of the Department of Physics & Astronomy ['93-'97] (27.5 faculty FTE, 16 staff, 60 graduate students, 40 undergraduate majors, \$2.1M personnel and operating budget, \$2.5M extramural research funds) at the **University of Kentucky**, I had responsibility for all aspects of administration: planning, academic programs (B.S., M.S., Ph.D., and service courses for engineering, pre-med, and general studies), faculty development (recruitment, tenure and promotion, evaluation), staff affairs, and research support (machine and electronic shops, computing, and indirect cost returns). Initiated improvements in: teaching evaluation, mentoring of Assistant professors, infrastructure (labs, shops), and communication among groups. During 94-95 I led a self-study effort that resulted in specific initiatives to improve all aspects of the Department's missions. I also convinced the faculty to relinquish a research staff position (draftsman) in favor of hiring an Instructional Laboratory Specialist to improve lower division physics laboratories. Major improvements to the instructional laboratories (to the tune of \$200K) were instituted. Two faculty members I recruited were awarded Sloan Research Fellowships (the first two in the history of the Department). I initiated open debate on the Department's role in affirmative action, and lobbied the faculty successfully to make a strong commitment to increasing under-represented groups. During my term the department hired a woman faculty member (first in 30 years), and a black faculty member. Extramural support grew from \$2M to \$3M during the last two years of my chairmanship.

As Associate Dean of the College of Arts & Sciences ['91-93] (22 departments, 350 faculty, \$28 million budget) at the **University of Kentucky** (land grant, Carnegie Research I University with 24,000 students on the main academic campus) I assisted the Dean, with one other Associate Dean, in the management of all facets: Development of a strategic plan (incorporating the changing nature of the professoriate, of higher education in general); preparation of two annual budgets; planning and implementation of a 5% mid-year budget reduction and a 10% recurring cut; development of a restructuring plan for the College to absorb the cuts; and promotion and tenure decisions. I had the primary responsibility for coordinating the course schedule for the College, and for the management of faculty distribution of effort (where we are experimenting with variable profiles), for allocating teaching resources, and for working with the Vice Chancellor for Research in coordinating the grant activity (about \$5 million per year) and the research support activity (about \$1 million per year) in the College. Among new initiatives I shared responsibility for were a new pilot project for a cohesive general studies program for undergraduates (the MiniCollege Method), and a systematic evaluation of graduate programs.

As Director of Graduate Studies in the Department of Physics, I oversaw a complete revision of the curriculum, qualifying examination, and advising of graduate students. I instituted a vigorous recruitment effort, especially among regional small colleges and universities. At the end of my term as Director, a U.S. Department of Education Fellowship grant to establish 8 new fellowships was awarded to the program.

Selected Committee Work

Indiana University

- 2004-2006 MetaCyt (Research and Commercialization Initiative) Steering Committee
- 2004-2006 Campus Enrollment Planning Committee
- 2002-2004 Campus Strategic Planning Committee
- 2002-2003 Search Committee for IU President

University of Kentucky

- 1996-1997 College of Arts and Sciences Review Committee
- 1994-1995 English Department Review Committee
- 1993-1994 Chair, Committee to Review the Center for Computational Sciences
- 1992-1993 Chancellor's Task Force on Restructuring and Realignment
- 1992-1993 Committee on Retention of First Year Students
- 1991-1993 Chair, University Research Computing Subcommittee
- 1990-1992 Chair, Library Subcommittee of the University Self-Study (SACS reaccreditation)
- 1989-1993 Advanced Science and Technology Commercialization Center (ASTeCC) Planning Committee
- 1988 - 1989 Search Committee for the Dean of the College of Engineering
- 1988 - 1989 Review Committee of the Department of Materials Science and Engineering
- 1988 - 1989 Chair, Senate Library Committee
- 1988 - 1991 Elected Member, University Senate
- 1988 - 1991 Elected Member, Graduate Council
- 1988 - 1991 Materials Science Ad-Hoc Committee, Spokesperson
- 1988 - 1989 Applied Energy Research Advisory Committee
- 1988 - 1989 Senate Library Committee
- 1987-1988 Senate Academic Programs Committee

Concurrent Positions

Consultant, Scientific Research Corp., Santa Monica, CA, 1981-1982
Visiting Scientist, International Center for Theoretical Physics, Trieste, Italy, 1984
Visiting Scientist, Oak Ridge National Laboratory, Oak Ridge, 1985
Technical Advisor, Synectico, Inc., Redondo Beach, CA., 1987-1988
Professore a contratto, Universita di Pavia, Italy, May 1990

Professional Service and Recognition:

Elected Fellow of the American Physical Society, Div. of Condensed Matter Physics, 1992
Panelist, American Council on Education General and Special meetings (2008, 2009)
Member, Board of Directors, Coldstream Laboratories, Inc. (start-up), 2010-
Member, Steering Committee, Bluegrass Bio, 2010-
Member, Board of Directors, Kentucky World Trade Center, 2010-
Invited Presenter, International Education Dialogue-Berlin (German-American Fulbright) (Apr. 2009)
Member of the Board, National Association of College & University Business Officers, 2007-2010
Chair, South Eastern Conference Academic Consortium, 2007-2010
Chair, Executive Committee, Bloomington Life Sciences Partnership, 2004-2006
Co-Chair: Bloomington Life Sciences Partnership (Economic Development), 2003-04
Co-Chair: IUB Campus United Way Drive, 2003-05
Program Coordinator, AAU Arts & Sciences Deans' Meeting, 2003-04
Guest Presenter, CIC Leadership Training Program, 2004, 2006
Guest Presenter at the Big10 Fund Raising Institute, 2003
Consulting Member, Indiana University Foundation Board, 2002-2006
Listed in American Men and Women of Science (Cattell Press, 1986)
Listed in Who's Who in American Science (Marqui's Who's Who, 1991)

Grants and Contracts:

"Optical Frequency Dynamics of Ionic Liquids", National Science Foundation, 1983-1987, \$81,400

Grant of Supercomputer Time, Pittsburgh Supercomputer Center, National Science Foundation, 1986-1988

"Reaction Rates and Pathways in Coal Plasticity Transformation", (Component of the Consortium for Fossil Fuel Liquefaction Science) Department of Energy, 1988-1989, \$18,000

"Computer Modeling of Vitrinite", Department of Energy, 1989-1990, \$23,000

"Computational Chemistry of Model Compounds", Department of Energy, 1990-1993, \$123,536

"Computational Chemistry of Model Compounds", Department of Energy, 1993-1995, \$130,000

"Low Dimensional Metals", National Science Foundation (EPSCoR), 1991-1994, \$80,000 (share as co-PI in a \$1M project)

"Computational Chemistry of Model Compounds," Department of Energy, 1993-1996, \$192,000

"Multi-level Approach to Complex Structures", National Science Foundation (EPSCoR), 1995-1998, \$150K (share as co-PI)

Post-doctoral Associates and Graduate Students

Dr. Gaetano Senatore 1985-1986

Dr. Michael Johnson 1986-1988

Dr. Majed Sawtarie Pew Summer Fellow, 1988

Dr. Harriet Ades 1989-1997

Dr. Madhu Menon 1991- 1994

Dr. Ernst Richter 1993-1994

Dr. Marek Grabowski, Ph.D. 1981

Dr. Pawel Hawrylak, Ph.D. 1984

Mr. Milan Rajkovic, M.S. 1984

Mr. Jinyang Tang, Ph.D. 1993

Ms. Jenny Yang, Ph.D. 1994

Mr. Carl Schwendler, 1994-1997

Publications

Book Chapters and Books

1. "Surface and Size Effects on the Light Scattering Spectra of Solids," D.L. Mills and K.R. Subbaswamy, in (Progress in Optics), vol. 19, edited by E. Wolf (North Holland, Amsterdam, 1981).
2. "Local Density Theory of Polarizability", G.D. Mahan and K.R. Subbaswamy (Plenum Press, New York, 1991) 255pp.
3. "Nonlinear Optical Constants of Alkali Halide Crystals" in Quantum Mechanical Cluster Calculations in Solid State Studies, edited by R.W. Grimes and C.R.A. Catlow (World Scientific, Singapore, 1992).

4. "Covalent Bonding between Fullerenes," M. Menon and K.R. Subbaswamy, in Fullerene Polymers and Fullerene Polymer Composites, edited by P.C. Eklund and A.M. Rao (Springer, Berlin, 2000).

Journal Publications

5. "Renormalization Group Results for Lattice-Gas Phase Boundaries in Two Dimensions," K.R. Subbaswamy and G.D. Mahan, Phys. Rev. Letters (37), 642 (1976).
6. "Brillouin Scattering from Thermal Fluctuations in Superionic Conductors," K. R. Subbaswamy, Solid State Commun. (19), 1157 (1976); (21), 371 (1976).
7. "Edge Localized Vibration Modes on a Rectangular Ridge," A.A. Maradudin and K.R. Subbaswamy, J. Appl. Phys. (48), 3810 (1977).
8. "Theory of Inelastic Light Scattering from Acoustic Phonons in an Opaque Crystal," K.R. Subbaswamy and A.A. Maradudin, Indian J. Pure and Appl. Phys., (16), 282 (1978).
9. "Light Scattering Spectra of Guided Wave Polaritons in Thin Crystals: Theory," K.R. Subbaswamy and D.L. Mills, Solid State Commun. (27), 1085 (1978).
10. "Interaction between Local Phonon Modes and Plasmons in n-Type Semiconductors," R. Sirko, K.R. Subbaswamy, and D.L. Mills, Phys. Rev. B(18), 851 (1978).
11. "Simple Model of Structural Phase Transition of the Order-Disorder Type," K.R. Subbaswamy and D.L. Mills, Phys. Rev. B(18), 1446 (1978).
12. "Photo-Elastic and Surface Corrugation Contributions to Brillouin Scattering from an Opaque Crystal," K.R. Subbaswamy and A.A. Maradudin, Phys. Rev. B(18), 4810 (1978).
13. " ϕ^4 -Domain Walls in Thin Ferromagnetic Films: Occurrence of a Novel Critical Point," K.R. Subbaswamy and D.L. Mills, Phys. Rev. Letters (41), 1079 (1978).
14. "Complex Scalar Fields in One Dimension with Four-fold Phase Anisotropy: Solitary-Wave Solutions," K.R. Subbaswamy and S.E. Trullinger, Phys. Rev. A(19), 1340 (1979).
15. "Influence of fd Mixing on Electronic Impurity Levels in Rare Earth Semiconducting Compounds," R.E. Camley, J.C. Parlebas, K.R. Subbaswamy and D.L. Mills, J. Physique (Colloq.) (40), C5-372 (1979).
16. "Analysis of Breit-Wigner Lineshape in the Raman Spectra of Graphite Intercalation Compounds," P.C. Eklund and K.R. Subbaswamy, Phys. Rev. B(20), 5157 (1979).
17. "Attracting Solitons and Discontinuous Lock-in Transition in a Peierls-Frohlich Condensate," M. Grabowski, K.R. Subbaswamy, and B. Horovitz, Solid State Commun. (34), 911 (1980).
18. "Instability of Non-Topological Solitons of coupled Scalar Field Theories in Two Dimensions," K.R. Subbaswamy and S.E. Trullinger, Phys. Rev. D(22), 1495 (1980).
19. "Intriguing Properties of Kinks in a Simple Model with a Two Component Field," K.R. Subbaswamy and S. E. Trullinger, Physica 2 D (1981) 379.
20. "Bond Alternation, On-Site Coulomb Correlations, and Solitons in Polyacetylene," K.R. Subbaswamy and M. Grabowski, Phys. Rev. B(24), 2168 (1981).
21. "Raman Scattering in High Temperature and Molten Potassium Iodide," P.C. Eklund, J. Giergiel, and K.R. Subbaswamy, Solid State Commun. (40), 139 (1981).
22. "Phase-Amplitude Soliton Lattice and the Lock-In Transition," M. Grabowski and K.R.

- Subbaswamy, *Physica* 5 D (1982) 348.
23. "Thermodynamic Model of Stage Transformations in Intercalated Graphite," P. Hawrylak and K.R. Subbaswamy, *Phys. Rev. B*(28), 4851 (1983).
 24. "Numerical Simulation of Kink Dynamics for a Two-component Field," P. Hawrylak, K.R. Subbaswamy, and S.E. Trullinger, *Phys. Rev.D*(29), 1154 (1984).
 25. "Elastic Plates Model of Domain Walls in Intercalated Graphite," P. Hawrylak, K.R. Subbaswamy, and G.W. Lehman, *Solid State Commun.*(51), 787 (1984).
 26. "Kinetics of Stage Transformation in Intercalated Graphite," P. Hawrylak and K.R. Subbaswamy, *Phys. Rev. Lett.* (53), 2098 (1984).
 27. "Light Scattering from Molten Alkali Halides," J. Giergiel, P.C. Eklund, and K.R. Subbaswamy, *Phys. Rev. B*(29), 3490 (1984).
 28. "Effect of c-axis Dispersion on the Optical Properties of Intercalated Graphite," D. Hoffman, P.C. Eklund, P. Hawrylak, and K.R. Subbaswamy, *Phys. Rev. B*(31), 3973 (1985).
 29. "Electro-optic Contribution to Field Induced First Order Raman Scattering from Alkali Halides," K.R. Subbaswamy and G.D. Mahan, *Phys. Rev. B*(32),5453 (1985).
 30. "Local Density Theory of Ionic Hyperpolarizability," K.R. Subbaswamy and G.D. Mahan, *J. Chem. Phys.* (84) 3317 (1986).
 31. "Theory of Microwave Absorption in Wide-Bandgap Insulators: The Role of Thermal Phonon Lifetimes," K.R. Subbaswamy and D.L. Mills, *Phys. Rev. B*(33), 4213 (1986).
 32. "Hyperpolarizabilities of Closed Shell Atoms in the Density Functional Formalism," G. Senatore and K.R. Subbaswamy, *Phys. Rev. A*(34), 3619 (1986).
 33. "Density Dependence of the Dielectric Constant of Rare Gas Crystals," G. Senatore and K.R. Subbaswamy, *Phys. Rev. B*(34), 5754 (1986).
 34. "Electro-Optic Contribution to Raman Scattering from Alkali Halides," G.D. Mahan and K.R. Subbaswamy, *Phys. Rev. B*(33), 8657 (1986).
 35. "Nonlinear Response of Closed Shell Atoms in the Density Functional Formalism," G. Senatore and K.R. Subbaswamy, *Phys. Rev. A*(35), 2440 (1987).
 36. "Hyperpolarizabilities of Alkali Halide Crystals using the Local Density Approximation," M.D. Johnson, K.R. Subbaswamy, and G. Senatore, *Phys. Rev. B*36, 9202 (1987).
 37. "Refractive Index of Rare Gas Liquids: First Principles Calculation," M.D. Johnson, K.R. Subbaswamy, and G. Senatore, *Phys. Rev. B*37, 6508 (1988).
 38. "Density Functional Approach to First Principles Calculations for Liquids," G. Senatore, M.D. Johnson, and K.R. Subbaswamy, *Phil. Mag.* A59, 53 (1989).
 39. "Nearest Neighbor Resonating Valence Bond State in Two Dimensions," M.D. Johnson and K.R. Subbaswamy, *Phys. Rev. B*37, 9390, (1988).
 40. "Cubic Anisotropy of Hyperpolarizabilities for Alkali Halide Crystals", M.D. Johnson, and K.R. Subbaswamy, *Phys. Rev. B*39 ., 10 275 (1989).
 41. "Volume Dependence of Polarizability in Alkali Halides", S. Pettersson and K.R. Subbaswamy, *Phys. Rev. B* 42, 5883 (1990).
 42. "Molecular Orbital Investigation of Coal Fragments and Model Compounds", H.F. Ades, A.L. Companion, and K.R. Subbaswamy, *J. Phys. Chem.*, 95, 2226 (1991).
 43. "A Comparative Study of Semiempirical Bond Dissociation Energy Calculations", H.F. Ades, A.L. Companion, and K.R. Subbaswamy, *J. Phys. Chem.* 95, 6502 (1991).
 44. "Universal Parameter Tight-Binding Molecular Dynamics: Application to C60", Madhu

- Menon and K.R. Subbaswamy, Phys. Rev. Lett. 67, 3487 (1991).
45. "Nonlinear Optical Constants in Alkali Halide Crystals, K.R. Subbaswamy, Rev. Solid State Phys. 5, 291 (1991).
 46. "Optimized Structures for $C_{60}O$ and $C_{60}O_2$ From Damped Molecular Dynamics Optimization Scheme", Madhu Menon and K.R. Subbaswamy, Chem. Phys. Lett., 201, 321 (1993).
 47. "Nonorthogonal Tight-Binding Molecular Dynamics Study of Silicon Clusters", Madhu Menon and K.R. Subbaswamy, Phys. Rev. B 47, 12754 (1993).
 48. "First-Principles Molecular Dynamics Study of Carbon Clusters", Madhu Menon, K.R. Subbaswamy, and Majid Sawtarie, Phys. Rev. B 48, 8398 (1993).
 49. "Molecular Orbital Calculations for Iron Catalysts", H.F. Ades, A.L. Companion, and K.R. Subbaswamy, Energy & Fuels, 8, 71 (1994).
 50. "Structure and Properties of C_{60} Dimers by Tight-Binding Molecular Dynamics", Madhu Menon, K.R. Subbaswamy, and Majid Sawatarie, Phys. Rev. B 49, 13996 (1994).
 51. "Structure of C_{20} : Cage vs. Bicyclic Rings," Majid Sawtarie, Madhu Menon and K.R. Subbaswamy, Phys. Rev. B 49, 7739 (1994).
 52. "Structure of Si_{60} : Cage vs. Network Structure", Madhu Menon and K.R. Subbaswamy, Chem. Phys. Lett. 219, 219 (1994).
 53. "Photoinduced Polymerization of Solid C_{70} Films," A.M. Rao, M. Menon, P.C. Eklund, K.R. Subbaswamy and D.S. Cornett, M.A. Duncan, and I.J. Amster, Chem. Phys. Lett. 224, 106 (1994).
 54. "Anisotropic Covalent Bonding in Photopolymerization of C_{70} ," M. Menon, A.M. Rao, K.R. Subbaswamy, and P.C. Eklund, Phys. Rev. B 51, 800 (1995).
 55. "Transferable Nonorthogonal Tight-Binding Parameters for Silicon," M. Menon and K.R. Subbaswamy, Phys. Rev. B 50, 11577 (1994).
 56. "Structure and Stability of Si_{45} Clusters: A Generalized Tight-Binding Molecular Dynamics Approach," Madhu Menon and K.R. Subbaswamy, Phys. Rev. B 51, 17952 (1995).
 57. "Structural and Vibrational Properties of Fullerenes and Nanotubes in a Non-orthogonal Tight-Binding Scheme," Madhu Menon, Ernst Richter, and K.R. Subbaswamy, J. Chem. Phys. 104, 5875 (1996).
 58. "Quantum Chemical Investigation of Coliquefaction Reactions of Coal and Polymers," H.F. Ades and K.R. Subbaswamy, Fuel Proc. Tech. (1996).
 59. "Diameter-selective Raman Scattering from Vibrational Modes in Carbon Nanotubes," A.M. Rao, E. Richter, S. Bandow, B. Chase, P.C. Eklund, K.A. Williams, S. Fang, K.R. Subbaswamy, M. Menon, A. Thess, R.E. Smalley, G. Dresselhaus, and M.S. Dresselhaus, *Science* (January 10, 1997).
 60. "Improved Tight-Binding Parametrization for Silicon," Madhu Menon and K.R. Subbaswamy, Phys. Rev. B 55, 9231 (1997).
 61. "Theory of size-dependent resonance Raman scattering from single-walled carbon nanotubes," Ernst Richter and K.R. Subbaswamy, Physical Review Letters 79, 2738 (1997).
 62. "Structure and vibrational properties of silicon clathrates in a generalized tight-binding molecular dynamics scheme," Madhu Menon, Ernst Richter, and K.R. Subbaswamy,

Physical Review B 56, 12290 (1997).

63. "Fused Fullerenes and 'Gearoids': Proposed New Forms of Carbon," Madhu Menon, Ernst Richter, and K.R. Subbaswamy, Phys. Rev. B 57, 4063 (1998).