Dr. LATHA KUMARI

PRESENT EMPLOYMENT

Assistant Professor, Dept. of Physics, BMS College of Engineering, Bangalore-19
From Aug 2014-Present

Ongoing Projects/Grant received:
1. DST-SERB-Carly Career Research Award 2016 of Rs. 25.25 Lakhs for the duration of 3 years. Title of the project: "Polymer-Thermoelectric nanocomposites for Green Energy Conversion" (Ref. No. ECR/2016/000694)
2. TEQIP- II Grant (TEQIP-II/2016/KA2GO4) of Rs. 3 Lakhs as a Start-up grant.
3. Vision Group of Science and Technology (VGST-GoK), K-FIST-Level 1 2016-17 grant of 20 Lakhs for the duration of 2 years (KSTePS/VGST-KFIST(L1)/2017/267).

PREVIOUS EMPLOYMENTS

Postdoctoral Researcher USA March 2007-March 2010
Worked as Postdoctoral Researcher at Department of Physics, Florida International Univesity, USA from March 2007-March 2010 with Prof. Wenzhi Li.

Postdoctoral Researcher Taiwan January 2006-March 2007
Worked as a Postdoctoral fellow at Department of Physics, National Dong Hwa University, Hualien 974, Taiwan, R.O.C. from January 2006-March 2007 with Prof. Yuan-Ron Ma.

EDUCATION

Indian Institute of Science Bangalore, India 2000 – 2005

Ph. D. (Experimental Condensed Matter Physics)
Structural Studies and Metal-Insulator Transition in Intercalated Amorphous Carbon
Research Supervisor: Prof. S.V. Subramanyam (Late), Department of Physics, IISc.

Bangalore University Bangalore, India 1996 – 1998
M. Sc. Physics (Distinction with 83.7% marks)(University second rank)
Specialization : Solid state physics

Bangalore University Bangalore, India 1993 – 1996
B. Sc. (P.C.M) (First Class)

Teaching Experience:

S.J.R.C Women's College, Bangalore, India 1998-2000
I have experience in teaching at PUC and bachelor degree level.

As a postdoctoral researcher at NDHU and FIU, I have co-guided Undergraduate, Master's and Ph.D., students in their research projects.

Fields of interest: Material Science, Nano-Materials, Nanoscience and Nanotechnology, Smart and Functional Nanomaterials, Nano-structure Fabrication, Nanodevices, Carbon based Nano-systems (CNT, Diamond like Carbon, Amorphous Carbon), Nanoparticles, Nanocomposites, Magnetic Nano-Materials, Surface Science, Polymeric Materials, Nanoceramics, Condensed Matter Physics, Semiconductor, Chemistry-Physics-Biology (CPB) Interface, Metal Oxide Thin films.

REVIEWER

Reviewed manuscripts for the following journals:

Applied Physics Letters (American Institute of Physics)
AIP Advances (American Institute of Physics)
Journal of Applied Physics (American Institute of Physics) etc.
Materials Research Express (IOP)

Honorary position held: June 2012-Present

Editorial Board Member, SCIENTIFIC REPORTS, Nature Publishing Group.

Member : ***American Physical Society (APS) (Past)***

User Member: ***Center for Nanophase Materials Sciences (CNMS), Oak Ridge National Laboratory (Past)***

LIFE MEMBER: ISTE 2015

PUBLICATIONS

Published: ***First author: 27***
Co-author (with equal contribution): 06
Total No. of citations: 1314 (Source: Google Scholar)
h-index: 20 (Source: Google Scholar)
Total No. of citations: 987 (Source: Scopus, Author ID: 6602138299)
h-index: 19 (Source: Scopus)
Total impact factor: 93.471 (Source: Journal impact factor 2016)

1. "Synthesis and structure of undoped and indium doped thermoelectric lead telluride nanoparticles"
K. Kadel, **Latha Kumari**, Xuewen Wang, Wenzhi Li, J.Y. Huang, P.P. Provencio, ***Nanoscale Research Letters*** 9, 227, 2014 **[Impact factor= 2.833, Citations=5]**.
2. "Synthesis and Thermoelectric Properties of Bi_2Se_3 Nanostructures"
K. Kadel, **Latha Kumari**, W.Z. Li, Jian Yu Huang, Paula P Provencio, ***Nanoscale Res. Lett.*** 6, 57, 2011**[Impact factor= 2.833, Citations= 71]**.
3. "Synthesis and characterization of Ruthenium oxide Nanorods"
S Neupane, G Kaganas, R Valenzuela, **L Kumari**, XW Wang, WZ Li, ***Journal of Materials Science***, 46, 4803, 2011 **[Impact factor= 2.599, Citations=6]**

4. "Nanosize transition metal antimonides, NiSb and $FeSb_2$: Solvothermal synthesis and characterization"
Latha Kumari, Wenzhi Li, Jian Yu Huang, Paula P Provencio, ***Journal of Physical Chemistry C* (ACS),** 114, 9573, 2010 **[Impact factor= 4.536, Citations= 19].**

5. "Solvothermal synthesis, structure and optical property of Nanosized $CoSb_3$ skutterudite"

Latha Kumari, W.Z. Li, Jian Yu Huang, Paula P Provencio, ***Nanoscale Res. Lett.*** 5, 1698, 2010 **[Impact factor= 2.833, Citations= 36]**.

6. "Synthesis, structure and optical properties of zinc oxide hexagonal microprisms"

Latha Kumari and W.Z. Li, ***Crystal Research and Technology*,** 45, 311, 2010 **[Impact factor= 1.0, Citations= 51]**.

7. "Integration of Carbon Nanotubes to C-MEMS for On-chip Supercapacitors"
W. Chen, M. Beidaghi, V. Penmatsa, K. Bechtold, **L. Kumari**, W.Z. Li, Chunlei wang, ***IEEE Transactions on Nanotechnology***, 9, 734, 2010 [**Impact factor= 2.485, Citations= 55**].

8. "Effect of surfactants on the nanostructure of magnesium borate hydroxide synthesized by hydrothermal route"

Latha Kumari, W. Z. Li, Shrinivas Kulkarni, K. H. Wu, Wei Chen, Chunlei Wang, Charles H. Vannoy and Roger M. Leblanc, ***Nanoscale Res. Lett.*** 5, 149, 2010 **[Impact factor= 2.833, Citations= 25].**

9. "Zinc oxide Micro- and Nano- Particles: Synthesis, structure and optical properties"

Latha Kumari, W.Z. Li, Charles H. Vannoy, Roger M. Leblanc, D.Z. Wang, ***Materials Research Bulletin***, 45, 190, 2010 **[Impact factor= 2.446, Citations= 18]**.

10. "Synthesis, characterization and optical properties of $Mg(OH)_2$ Micro-/Nanostructure and its conversion to MgO"
Latha Kumari W.Z. Li, Charles H. Vannoy, Roger M. Leblanc, D.Z. Wang, ***Ceramics International*,** 35, 3355, 2009 **[Impact factor= 2.986, Citations= 107]**.

11. "Synthesis, microstructure and optical characterization of Zirconium Oxide Nanostructures", **Latha Kumari,** G.H. Du, W.Z. Li, R.S. Vennila, S.K. Saxena, D.Z. Wang, ***Ceramics International*,** 35, 2401, 2009 **[Impact factor= 2.986, Citations= 74]**.

12. "Mechanical Properties of Carbon Nanotube-Alumina Nanocomposites Synthesized by Chemical Vapor Deposition and Spark Plasma Sintering"
T. Zhang, **Latha Kumari** G.H. Du, W.Z. Li et al. ***Composites Part A: Applied Science and Manufacturing*,** 40, 86, 2009 **[Impact factor=4.075, Citations= 59]**.

13. "Controlled hydrothermal synthesis of Zirconium oxide nanostructures and their optical properties"
Latha Kumari, W.Z. Li, J.M. Xu, R.M. Leblanc et al. ***Crystal Growth and Design (ACS)*,** 9, 3874, 2009 **[Impact factor= 4.055, Citations= 71]**.

14. "Synthesis, microstructure and electrical conductivity of carbon Nanotube-alumina nanocomposite"
Latha Kumari, T. Zhang, G.H. Du, W.Z. Li, Q.W. Wang et al. ***Ceramics International*,** 35, 1775, 2009 **[Impact factor= 2.986, Citations= 55]**.

15. "Self-assembly of β-$Ni(OH)_2$ nanoflakelets to form submicrospheres by hydrothermal route"

Latha Kumari, W.Z. Li, ***Physica E: Low-dimensional Systems and Nanostructures*,** 41, 1289, 2009 **[Impact factor= 2.221, Citations= 19]**.

16. "Structural, optical and electrical properties of sulfur-incorporated amorphous carbon films"

Latha Kumari and S.V. Subramanyam, ***Applied Physics A*****,** 95, 343, 2009 **[Impact factor= 1.455, Citations= 9]**.

17. "Vertically aligned and interconnected nickel oxide Nanowalls fabricated by hydrothermal route"

Latha Kumari, W.Z. Li, C.H. Vannoy, D.Z. Wang, ***Crystal Research and Technology*****,** 44, 495, 2009 **[Impact factor= 1.0, Citations=32]**.

18. "Monoclinic zirconium oxide nanostructures synthesized by hydrothermal route"

Latha Kumari, W.Z. Li, D. Wang, ***Nanotechnology*** 19, 195602, 2008 **[Impact factor= 3.578, Citations= 39]**.

19. "Thermal Properties of CNT-Alumina Nanocomposites"

Latha Kumari, T. Zhang, G.H. Du, W.Z. Li, Q.W. Wang, A. Datye, K.H. Wu, ***Composites Science and Technology***, 68, 2178, 2008 **[Impact factor= 4.873, Citations= 106]**.

20. "Laser oxidation and wide-band photoluminescence of thermal evaporated bismuth thin films"

Latha Kumari, Jin-Han Lin and Yuan-Ron Ma, ***Journal of Physics D: Applied Physics*** 41, 25405, 2008 **[Impact factor= 2.588, Citations= 37]**.

21. "Synthesis of bismuth oxide Nanostructures by an oxidative metal vapour phase deposition technique"

Latha Kumari, Jin-Han Lin and Yuan-Ron Ma, ***Nanotechnology*** 18, 295605, 2007 **[Impact factor= 3.578, Citations= 49]**.

22. "X-ray diffraction and Raman scattering studies on large-area array and Nanobranched structure of 1D MoO_2 Nanorods"

Latha Kumari, Y.R. Ma, C.C. Tsai, Y.W. Lin, S. Y. Wu, K.W. Cheng and Y. Liou, ***Nanotechnology*** 18, 115717, 2007 **[Impact factor= 3.578, Citations= 80]**.

23. "One-dimensional Bi_2O_3 Nanohooks: synthesis, characterization and optical properties"

Latha Kumari, Jin-Han Lin and Yuan-Ron Ma, ***Journal of Physics: Condensed Matter*** 19, 406204, 2007 **[Impact factor= 2.649, Citations= 82]**.

24. "Effects of deposition temperature and thickness on the structural properties of thermal evaporated bismuth Thin films"

Latha Kumari, S.J. Lin, J.H. Lin, Y.-R. Ma, P.C. Lee, Yung Liou, ***Applied Surface Science*** 253, 5931, 2007 **[Impact factor= 3.387, Citations= 30]**.

25. "Tuning of the metal-insulator transition in iodine incorporated amorphous carbon"

Latha Kumari and S.V. Subramanyam, ***J. Appl. Phys***. 99, 96107, 2006 **[Impact factor= 2.068, Citations= 7]**.

26. "Magnetoresistance and magnetic field induced metal-insulator transition in intercalated amorphous carbon",

Latha Kumari and S.V. Subramanyam, ***Mat. Sci. Eng. B*** 129, 48, 2006 **[Impact factor= 2.552, Citations= 7]**.

27. "Optical properties and electrical transport in intercalated amorphous carbon"

Latha Kumari and S.V. Subramanyam, ***Mat. Res. Bull.*** 41, 2000, 2006 **[Impact factor= 2.446, Citations= 5]**.

28. "Characterization and thermal stability of iodinated amorphous conducting carbon films"

Latha Kumari, S.V. Subramanyam, Arup Gayen, V. Jayaram, ***Thin Solid Films*** 471, 252, 2005 **[Impact factor= 1.879, Citations= 7]**.

29. "Metal-insulator transition in iodinated amorphous conducting carbon films"

Latha Kumari, S.V. Subramanyam, S. Eto, K. Takai and T. Enoki, ***Carbon*** 42, 2133, 2004 **[Impact factor= 6.337, Citations= 12]**.

30. "Structural and electrical properties of amorphous carbon-sulfur composite films"

Latha Kumari and S.V. Subramanyam, ***Bull. Mater. Sci.*** 27, 289, 2004 **[Impact factor= 0.584, Citations= 13]**.

31. "Amorphous Conducting Carbon and Carbon Nitride"

B. Gopalakrishnan, **Latha Kumari**, V. Prasad and S.V. Subramanyam (Proceedings of the Symposia of 14th IUMRS-ICAM, 2003, Japan), ***Transactions of the Materials Research Society of Japan***, 29, 43, 2004.

32. "Study of structural and transport properties of iodinated amorphous conducting carbon films"

Latha Kumari and S. V. Subramanyam, ***Int. J. Nanosci.*** 3, 549, 2004 **[Impact factor= 0.56, Citations= 1]**.

33. "Effect of iodine incorporation on the electrical properties of amorphous conducting carbon films"

Latha Kumari, V. Prasad and S.V. Subramanyam, ***Carbon*** 41, 1841, 2003 **[Impact factor= 6.337, Citations= 33]**.

Book Chapters:

1. Amit Datye, **Latha Kumari** et al., "Fabrication of Silicon Nitride-Multi-Walled Nanotube Composites by Direct In-Situ Growth of Nanotubes on Silicon Nitride Particles", in *Mechanical Properties and Performance of Engineering Ceramics and Composites IV* (Wiley Publications), 30(2), 2009.

2. Amit Datye, **Latha Kumari** et al., "Synthesis of yttria stabilized zirconia - multi-walled nanotube nanocomposites by direct in-situ growth of MWNTs on zirconia particles", in *Mechanical Properties and Performance of Engineering Ceramics and Composites IV* (Wiley Publications), 30(2), 2009.

3. Amit Datye, **Latha Kumari** et al., "Aluminum Nitride Multi-Walled Nanotube (MWNTs) Nanocomposite by Direct In-situ Growth of CNTs on Aluminum Nitride Particles" in *Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials III* (Wiley Publications), Chapter 22, 2010.

4. Amit Datye, **Latha Kumari** et al., "Direct In-Situ Growth of Multiwalled Carbon Nanotubes on Silicon Carbide Particles as a Precursor for Fabricating Silicon Carbide – Carbon Nanotube Composites", in *Ceramics for Environmental and Energy Applications* (Wiley Publications), Chapter 13, 2010.

CONFERENCES / WORKSHOPS:

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1. Synthesis and thermoelectric properties of PbTe nanostructures
K. Kadel, L. Kumari, W.Z. Li, APS March Meeting 2012, Boston, USA.
2. "Synthesis and thermoelectric properties of nanosize $CoSb_3$ skutterudite by solvothermal route", L. Kumari, W.Z. Li, Z.F. Ren, APS March Meeting 2010, Portland, USA.
3. "Solvothermal synthesis and thermoelectric property of nanostructured bismuth selenide", K. Kadel, L. Kumari, W.Z. Li, J. Huang, P.P. Provencio, Z.F. Ren, APS March Meeting 2010, Portland, USA.
4. "Synthesis and characterization of ruthenium dioxide nanorods", S. Neupane, L. Kumari, G. Kaganas, W.Z. Li, APS March Meeting 2010, Portland, USA.
5. "Fabrication and characterization of vertically aligned and interconnected nickel oxide nanowalls", Oral presentation, APS March Meeting 2009, Pittsburgh, USA.
6. "Fabrication of zinc oxide microstructures and their properties", Poster presentation, APS March Meeting 2009, Pittsburgh, USA.
7. "Synthesis, characterization and optical properties of magnesium hydroxide micro-/ nanostructures", Poster presentation, APS March Meeting 2009, Pittsburgh, USA.
8. "An Indo-Finland Joint Workshop on Physics and Techniques below 20K" held at Indian Institute of Science, Bangalore, India from February 16-18, 2004.
9. Poster presentation at 15th AGM-MRSI, 2004, Varanasi, India. "Influence of sulfur incorporation on the structural and transport properties of amorphous conducting carbon films" by Latha Kumari and S. V. Subramanyam. (**Got "Certificate of merit" for best poster in the category**).
10. Poster presentation at IUMRS-ICA and ICMAT 2003, Singapore. "Study of structural and transport properties of iodinated amorphous conducting carbon films" by Latha Kumari and S. V. Subramanyam.
11. "Indo-German school on Synchrotron Radiation Sources and their Applications" held at Centre for Advanced Technology, Indore, India from November 11-22, 2002.
12. Poster presentation at 13th AGM-MRSI, 2002, Hyderabad, India.. "Doping of amorphous conducting carbon films with iodine" by Latha Kumari, V. Prasad and S. V. Subramanyam.

Invited talks:

1. Invited talk on "Thermoelectric materials" on November 28, 2015 at Workshop series – XL on "Synthesis, characterization, electrical, magnetic properties and applications of nanomaterials" at **Siddaganga Institute of Technology**, Tumkur.
2. Robert Bosch Centre for Cyber Physical Systems at **Indian Institute of Science**, Bangalore, April, 2012. "Thermoelectric Nanomaterials for Energy Conversion Devices".
3. **Poornaprajna Institute of Scientific Research**, Bangalore, January, 2011. "Thermoelectric Nanomaterials for Energy Conversion Devices".
4. Center for Sustainable Technologies, **Indian Institute of Science**, Bangalore, April, 2011. "Thermoelectric Nanomaterials for Clean and Sustainable Technology".

Faculty Development Programs/Workshops attended since 2015

1. Workshop on "Outcome Based Education" Pre-conference activity by ICTIEE 2015 organized jointly by BMS College of Engineering and IUCEE on January 6, 2015.
2. Faculty Development Programme on "Intellectual Property Rights: Significance for Academia" at BMS College of Engineering in association with Visvesvaraya Trade Promotion Centre (GoK Centre for Export Promotion), Bangalore on March 25, 2015.
3. **Two-week ISTE STTP on "Engineering Physics"** conducted by IIT Bombay from December 8-18, 2015 under NME through ICT (MHRD) at BMS College of Engineering, Bangalore
4. Workshop on "Polymer Matrix Composites" as Pre-conference activity by ICAMA 2016 organized jointly by COE in Advanced Materials Research and Department of Mechanical Engineering, BMS College of Engineering. Bangalore on June 15, 2016.
5. One Week Technology Transfer and FDP on "Conducting Polymer Composites: Synthesis and Characterization" from June 6-10, 2016 conducted by Department of Physics, BMS College of Engineering, Bangalore.
6. One Week FDP on "Recent Advances in Chemistry of Materials for Engineering Applications" (RACMEA-2016) from July 11-15, 2016 conducted by the Department of Chemistry, BMS College of Engineering, Bangalore.
7. One Week FDP on " Essentials of Pedagogy" from July 25-29, 2016 conducted by Department of Chemistry, BMS College of Engineering, Bangalore in association with NITTTR, Chennai.

Organizer:

1. One of the Organizers for the One Week Technology Transfer and FDP on "Conducting Polymer Composites: Synthesis and Characterization" from June 6-10, 2016 conducted by Department of Physics, BMS College of Engineering, Bangalore.