

Media coverage and international attention of hydrogen energy and water research work from group:

“From The Lab: New way to clean water polluted by mercury” (May 22, 2018)

<http://indianexpress.com/article/explained/from-the-lab-new-way-to-clean-water-polluted-by-mercury-5185917/>

** corresponding patent – available for licensing

Our work featured in 'Science Trends', a technical magazine based off the US, having wide circulation. (Aug 2018)

<https://sciencetrends.com/water-splitting-in-contaminated-waters/>

** corresponding patent – available for licensing

“Room temperature hydrogen production from Hg contaminated water, with desirable throughput, and simultaneous Hg-removal”
(Dec 2017)

<https://reginnovations.org/key-scientific-articles/room-temperature-hydrogen-production-hg-contaminated-water-desirable-throughput-simultaneous-hg-removal/>

** corresponding patent – available for licensing

PUBLICATIONS / PATENTS/ PRESENTATIONS:

1. Sritama, Tanvi Gupte, Jenifer, **Tiju Thomas**, T. Pradeep, “*Arsenic in water: fundamentals of measurement and remediation*” in Encyclopedia of Water: Science, Technology, and Society (Wiley, 2018) (Book chapter, peer reviewed, and submitted on invitation)
2. Santanu Maity and **Tiju Thomas**, "*Hole collecting treated graphene layer and PTB7:PC71BM based bulk-heterojunction OPV with improved carrier collection and photovoltaic efficiency*", IEEE Transactions on Electron Devices (just accepted) (2018)
3. Sritama, Tanvi Gupte, Jenifer, **Tiju Thomas**, T. Pradeep, “Arsenic in Water: Speciation, Sources, Distribution, and Toxicology” in Encyclopedia of Water: Science, Technology, and Society (Wiley, 2018) (Book chapter, peer reviewed, and submitted on invitation)
4. Sefiu Abolaji Rasaki, Bingxue Zhang, Kousika Anbalgam, **Tiju Thomas**, Minghui

- Yang, "Synthesis and application of nano-structured metal nitrides and carbides: A review", Progress in Solid State Chemistry 50, 1-15 (2018) <https://doi.org/10.1016/j.progsolidstchem.2018.05.001>.
5. Bhusankar Talluri, Edamana Prasad, Tiju Thomas, "Impact of solvent on the formation and optical properties of digestively ripened, ultra-small ($r < 2$ nm) copper oxide quantum dots", Journal of Molecular Liquids, <https://doi.org/10.1016/j.molliq.2018.05.069>.
 6. Kousika Anbalgan and **Tiju Thomas**, "Size-dependent disproportionation (in ~ 2 -20 nm regime) and hybrid-Bond-valence derived interatomic potentials for BaTaO₂N", Applied Nanoscience, <https://doi.org/10.1007/s13204-018-0785-x>.
 7. Abdul Malek, Edamana Prasad and **Tiju Thomas**, "Evidence of Nano-galvanic Couple Formation on in-situ Formed Nanoaluminum-amalgam Surfaces for Passivation-bypassed Water Splitting" International Journal of Hydrogen Energy, 43(24), 10878-10886 (2018), <https://doi.org/10.1016/j.ijhydene.2018.04.204>.
 8. G. Sudha Priyanga and **Tiju Thomas**, "Direct band gap narrowing and light-harvesting-potential in orthorhombic In-doped-AlFeO₃ perovskite: A first principles study", Journal of Alloys and Compounds 750, 312–319 (2018), <https://doi.org/10.1016/j.jallcom.2018.03.388>.
 9. "Surface enthalpy driven size focussing trends: predictive modelling for digestive ripening of spherical particles", Applied Surface Science, 448, 248-253 (2018), <https://doi.org/10.1016/j.apsusc.2018.04.134>.
 10. Qian Wu, Xiaojie Wang, RasakiSefiuAbolaji, **Tiju Thomas**, Chuanxi Wang, Chi Zhang and Minghui Yang, "Yellow-Emitting Carbon Dots Impregnated Carboxy MethylCellulose/Poly-vinyl-alcohol and Chitosan: Stable, Free-Standing, Enhanced Quenching for Cu²⁺ ions Sensor", Journal of Materials Chemistry C, 6, 4508-4515 (2018) DOI: [10.1039/C8TC00660A](https://doi.org/10.1039/C8TC00660A).

11. Santosh Behara, Lalitha Ghatti, Shivani Kanthamani, Malathi Dumpala and Tiju Thomas “*Structural, optical, and Raman studies of Gd doped sodium bismuth titanate*”, *Ceramic International*, 44(11), 12118-12124 (2018),
<https://doi.org/10.1016/j.ceramint.2018.03.233>.
12. Bhusankar Talluri, Edamana Prasad, **Tiju Thomas**, “*Critical role of surfactants in the formation of digestively-ripened, ultra-small ($r < 2$ nm) copper oxide quantum dots*”, *Superlattices and Microstructures*, 116, 122-130 (2018) DOI:
[10.1016/j.spmi.2018.02.010](https://doi.org/10.1016/j.spmi.2018.02.010)
13. Fengdong Qu, Shang W, **Tiju Thomas**, Ruan, S. and Yang, M. "*Self-template derived ZnFe₂O₄ double-shell microspheres for chemresistive gas sensing.*" *Sensors and Actuators B: Chemical* 265, 625-631 (2018),
<https://doi.org/10.1016/j.snb.2018.03.108>.
14. Bingxue Zhang, Xinxin Zhou, Shendan Zhang, Fengdong Qu, **Tiju Thomas^{c,*}** and Minghui Yang*, "*Porous coral-like NiCo₂O₄ nanospheres with promising xylene gas sensing properties*", *Sensors & Actuators: B. Chemical* 261(1), 203-209(2018),
<https://doi.org/10.1016/j.snb.2018.01.125>.
15. Prasanna Kumar, NagarajuKottam, Preetham R, R. Harikrishna, **Tiju Thomas**, "*Understanding the photoluminescence behaviour in nano CaZrO₃:Eu³⁺ pigments by Judd-Ofelt intensity parameters*", *Dyes and Pigments* 150, 306-314 (2018),
<https://doi.org/10.1016/j.dyepig.2017.12.022>.
16. Fengdong Qu, Shang, W, Wang, D, Du S, **Tiju Thomas**, Ruan, S. and Yang, M., “*Coordination Polymers Derived Multi-shelled Mixed Ni-Co Oxides Microspheres for Robust and Selective Detection of Xylene*” *ACS Applied Materials & Interfaces* 10 (17), 15314-15321 (2018) DOI: [10.1021/acsami.8b03487](https://doi.org/10.1021/acsami.8b03487).
17. BhusankarTalluri, Edamana Prasad, Tiju Thomas, “*Critical role of surfactants in the formation of digestively-ripened, ultra-small ($r < 2$ nm) copper oxide quantum dots*”

18. Bandi Pallavi, Sneha Sathyan, Takuya Yoshimura, Praveen Balakrishnan, Kousika Anbalagan, Bhusankar Talluri, Sarathi Ramanujam, Prem Ranjan, and **Tiju Thomas**, “*Suppression of red luminescence in wire explosion derived Eu:ZnO*”, Journal of Electronic Materials 47(3), 1924-1931 (2018).
19. Manjunatha S., Harikrishna R., **Tiju Thomas**^{*}, Bhabani Shankar Panigrahi, and Dharmaprakash M. S., “*Moss-Burstein effect in stable, cubic ZrO₂:Eu⁺³ - nanophosphors prepared by rapid microwave-assisted solution-combustion technique*”, Materials Research Bulletin 98, 139-147 (2018) .
<https://doi.org/10.1016/j.materresbull.2017.10.006>
20. Sathishkumar Kannaiyan, Chitra Boobalan, Avinash Umasankaran, Abhaiguru Ravirajan, Sneha Sathyan, Tiju Thomas, “*Comparison of experimental and calculated thermophysical properties of alumina/cupric oxide hybrid nanofluids*”, Journal of Molecular Liquids 244, 469-477 (2017).
<https://doi.org/10.1016/j.molliq.2017.09.035>
21. Abhishek Sarkar, Christoph Loho, Leonardo Velasco, **Tiju Thomas**, Subramshu S. Bhattacharya, Horst Hahn, and Ruzica Djenadic, “*Multicomponent equiatomic rare earth oxides with narrow band gap and associated praseodymium multivalency*”, RSC Dalton Transactions 46, 12167-12176 (2017).doi: [10.1039/C7DT02077E](https://doi.org/10.1039/C7DT02077E)
22. Mingming Zou, Erum Pervaiz, Lu Feng, **Tiju Thomas**, and Minghui Yang, “*Amine coupled Ordered Mesoporous (Co-N) co-doped TiO₂: Green Photocatalyst for Selective Aerobic Oxidation of Thioether*” RSC Catal. Sci. Technol. (2017). Doi: 10.1039/C7CY00946A
23. Bhusankar Talluri and Tiju Thomas, “*Indications of hard-soft-acid-base interactions governing formation of ultra-small ($r < 3$ nm) digestively ripened copper oxide quantum-dot*”, Chemical Physics Letters 685, 84-88 (2017).doi:[10.1016/j.cplett.2017.07.041](https://doi.org/10.1016/j.cplett.2017.07.041)

24. Argha Sarkar, Santanu Maity, Aneesh M. Joseph, S Chakraborty and **Tiju Thomas**, "*Methane-Sensing Performance Enhancement in Graphene Oxide/Mg:ZnOHeterostructure Devices*", Journal of Electronic Materials: 1-7. DOI: 10.1007/s11664-017-5619-1 (2017)
25. Abdul Malek, Edamana Prasad, and **Tiju Thomas**, "*Chimie douce hydrogen production from Hg contaminated water, with desirable throughput, and simultaneous Hg-removal*", International Journal of Hydrogen Energy, 42 (24), 5724-15730 (2017).
26. Mingming Zou, Fengqiang Xiong, Ayyakannu Sundaram Ganeshraja, Xiaohua Feng, Chuanxi Wang, **Tiju Thomas*** and Minghui Yang, "*Visible light photocatalysts (Fe, N):TiO₂ from ammonothermally processed, solvothermal self-assembly derived Fe-TiO₂ mesoporous microspheres*", Materials Chemistry and Physics 195, 259-267 (2017). DOI: 10.1016/j.matchemphys.2017.04.035
27. Xiong Feng-Qiang, Lipeng Wan, Yue Li, **Tiju Thomas**, Francis Joseph DiSalvo, and Minghui Yang, "*Crucial role of donor density in the performance of oxynitride perovskite LaTiO₂N for photocatalytic water oxidation reaction*", ChemSusChem 10 (5), 930-937 (2017).
28. Zou Mingming, Honghong Liu, Lu Feng, **Tiju Thomas**, and Minghui Yang, "*Enhanced visible light photocatalytic activity in N-doped edge-and corner-truncated octahedral Cu₂O*", Solid State Sciences 65, 22-28 (2017).
29. Zou Mingming, Honghong Liu, Lu Feng, FengqiangXiong, Tiju Thomas, and Minghui Yang. "Effect of nitridation on visible light photocatalytic behavior of microporous (Ag, Ag₂O) co-loaded TiO₂", Microporous and Mesoporous Materials 240 (2017): 137-144.
30. Wan, Lipeng, Feng-QiangXiong, Yue Li, **Tiju Thomas**, RuxinChe, and Minghui Yang. "*Low Defect Density, High Surface Area LaNbON₂ Prepared via Nitridation of*
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31. Xin Liu, Nan Yin, **Tiju Thomas**, Minghui Yang, Junhu Wang and Quan Shi, "*Effect of nitrogen substitution on the structural and magnetic ordering transitions of NiCr₂O₄*", RSC Advances 6, 112140-112147 (2016); DOI: 10.1039/C6RA22773B
32. Prakashbabu, D., H. B. Ramalingam, R. Hari Krishna, B. M. Nagabhushana, R. Chandramohan, C. Shivakumara, J. Thirumalai, and **Tiju Thomas**, "*Charge compensation assisted enhancement of photoluminescence in combustion derived Li⁺ co-doped cubic ZrO₂: Eu³⁺ nanophosphors*", Physical Chemistry Chemical Physics 18, no. 42 (2016): 29447-29457. DOI: 10.1039/c6cp04633a.
33. Malek, Abdul, **Tiju Thomas**, and Edamana Prasad, "Visual and Optical Sensing of Hg²⁺, Cd²⁺, Cu²⁺, and Pb²⁺ in Water and Its Beneficiation via Gettering in Nanoamalgam Form," ACS Sustainable Chemistry & Engineering 4(6) : 3497-3503 (2016).
34. Jian Zheng, Feng-Qiang Xiong, Mingming Zou, **Tiju Thomas**, Heng Jiang, Ying Tian, Minghui Yang, "*Enhanced photocatalytic degradation of rhodamine B under visible light irradiation on mesoporous anatase TiO₂ microspheres by codoping with W and N*", Solid State Sciences 54, 49-53 (2016)
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36. R. Hari Krishna, B. M. Nagabhushana, H. Nagabhushana, N. Suriya Murthy, C. Shivakumara, Babu Rao, **Tiju Thomas**, "*Luminescence enhancement in monoclinic CaAl₂O₄:Eu²⁺, Cr³⁺ nanophosphor by fuel-blend combustion synthesis*", Chemical Engineering Journal 267, 317-323 (2015).

37. Niya Mary and **Tiju Thomas**, “*Nanorod to quantum dot conversion in ZnO dispersions with co-surfactants*”, RSC Advances 5 (20), 15154-15158 (2015).
38. Aakanksha Chaudhary, Poshit Nag, **Tiju Thomas**, N. Ravishankar, Manish Jain, SrinivasanRaghavan, “*Synergistic effect of Mo+Cu co-doping on the photocatalytic behavior of metastable TiO₂ solid solutions*”, ACS Journal of Physical Chemistry C 118 (51), 29788-29795 (2014).
39. Arun D Rao, Suresh Karalatti, Praveen C Ramamurthy, **Tiju Thomas**, “*Self-assembled, aligned ZnO nanorod buffer layers for high current density, inverted organic photovoltaics*”, ACS Applied Materials and Interfaces 6(19), 6792-16799 (2014)
40. D. L. Monika, H. Nagabhushana, R. Hari Krishna, B. M. Nagabhushana, S. C. Sharma, Tiju Thomas, “*Synthesis and photoluminescence investigations on Li⁺ co-activator based Sr₂CeO₄:Dy³⁺ nanophosphor – a viable potential white light phosphor*”, RSC Advances 4(73), 38655-38662 (2014).
41. Niya Mary Jacob and **Tiju Thomas**, "Digestive ripening and green synthesis of ultra-small ($r < 2\text{nm}$) stable ZnO quantum dots." *Ceramics International* 40.9 (2014): 13945-13952. <http://dx.doi.org/10.1016/j.ceramint.2014.05.116>
42. R. Hari Krishna, B. M. Nagabhushana, H. Nagabhushana, D. L. Monika, R. Sivaramakrishna, C. Shivakumara, R. P. S. Chakradhar, **Tiju Thomas**, “*Photoluminescence, thermoluminescence and EPR studies of solvothermally derived Ni²⁺ doped Y(OH)₃ and Y₂O₃ multi-particle-chain microrods*”, Journal of Luminescence 155,125-134 (2014).
43. Niya Mary, Giridhar Madras, NagarajuKottamand**Tiju Thomas**, “*Multivalent Cu doped ZnO nanoparticles with full solar spectrum absorbance and enhanced photoactivity*” ACS Industrial and Engineering Chemistry Research 53 (14): 5895–5904 (2014).

44. R. Hari Krishna, B. M. Nagabhushana, H. Nagabhushana, N. Suriya Murthy, R. Sivaramakrishna, C. Shivakumara, R. P. S. Chakradhar, **Tiju Thomas**, “*Combustion synthesis approach for spectral tuning of Eu doped CaAl_2O_4 phosphors*”, Journal of Alloys and Compounds 589 : 596-603 (2014).
45. R. Hari Krishna, B. M. Nagabhushana, H. Nagabhushana, R. Sivaramakrishna, C. Shivakumara, R. P. S. Chakradhar, **Tiju Thomas**, “*Auto-ignition based synthesis of Y_2O_3 for photo- and thermo-luminescent applications*”, Journal of Alloys and Compounds 585: 129-137 (2014) . (<http://dx.doi.org/10.1016/j.jallcom.2013.09.037>)
46. Niya Mary Jacob, PraveenaKuruva, Giridhar Madras and **Tiju Thomas**, “*Room temperature synthesized ZnO, (Zn,Cu)O and cobalt ferrite based versatile adsorbents*”, ACS Industrial and Engineering Chemistry 52 (46), 16384–16395 (2013) (<http://dx.doi.org/10.1021/ie402727z>)
47. Rajesh Kumar Prusty, PraveenaKuruva, U. Ramamurty, **Tiju Thomas**, “*Correlations between photoluminescence and mechanical modulus trends in Eu doped sodium bismuth titanate*”, Solid State Communications 173, 38-41 (2013). <http://dx.doi.org/10.1016/j.ssc.2013.09.002>
48. PraveenaKuruva, S. Srinath, B. Radhika and **Tiju Thomas**, “*Magnetic property optimization in size-controlled cobalt ferrite nanoparticles prepared using an aqueous chemical route*”, IEEE Transactions on Magnetics (2013) (<http://dx.doi.org/10.1109/TMAG.2013.2283467>)
49. **Tiju Thomas** and NagarajuKottam, “*Combining “chimiedouce” and green principles for the developing world: improving industrial viability of photocatalytic water remediation*”, Chemical Engineering Science (letter to the editor) (2013) 102, 283-288 (<http://dx.doi.org/10.1016/j.ces.2013.08.004>)
50. **Tiju Thomas**, Shawn Chatman, Jake Wells, Lisa Emberley, Muhammad Asim Rasheed and Kristin M. Poduska, “*Lateral heterogeneities in ZnO Electrodeposits and Their Impact on Electrical and Optical Properties*”, ECS Solid State Letters 1 (2), P35-P37 (2012).

51. **Tiju Thomas, XiaomeiGuo, Junxia Shi, Lori Lepak, MVS Chandrashekhar, Kewen Li, Francis DiSalvo and Michael G Spencer, “Gallium nitride powders: mechanism of ammonothermal synthesis, ball-mill assisted rare earth doping and uniform electrophoretic deposition”, Journal of Crystal Growth, 316, 90-96 (2011).**
52. **W. M. Jadwisienczak, K. Wisniewski, M. Spencer, Tiju Thomas and D. Ingram, “Optical properties, luminescence quenching mechanism and radiation hardness of Eu doped GaN powder”, Radiation Measurements, 45, 500-502 (2010).**
53. **Tiju Thomas, XiaomeiGuo, MVS Chandrashekhar, Carl B. Poitras, William Shaff, Mark Dreibelbis, Jesse Reiherzer, Kewen Li, Francis J. DiSalvo, Michal Lipson and M.G. Spencer,”Purification and mechanical nanosizing of Eu-doped GaN”, Journal of Crystal Growth, 311, 4402-4407 (2009).**
54. **K. Wisniewski, W. Jadwisienczak, Tiju Thomas and M. Spencer, “High pressure luminescence studies of europium doped GaN”, Journal of Rare Earths 27, 667 (2009).**
55. **Wojciech M. Jadwisienczak, Saleem Ramadan, Tiju Thomas, Michael G. Spencer, Nelson Y. Garces, Evan R. Glaser and Krzysztof Wisniewski, “Luminescence and Excitation Mechanisms of Eu-doped GaN Phosphors”, MRS Proceedings, 1111, 1111-D02-07 (2009).**
56. **Tiju Thomas, Dhananjai Pandey and Umesh V. Waghmare, “Soft modes at the stacking faults in SiC crystals: First principles calculations”, Physical Review B, 77, 121203 (Rapid Communication) (2008).**
57. **Assa Aravindh, ShobhanaNarasimhan, Tiju Thomas et al. “Si_xC_{1-x}O₂ alloys: A possible route to stabilize carbon-based silica like solids?”, Solid State Communications 144, 273-276 (2007).**

a. Manuscripts currently under review with IITM affiliation

- Kousika Anbalagan and **Tiju Thomas**, “*Suppression of degassing in BaTaO₂N nanoparticles via doping of high vapor pressure elements: a hybrid-Bond Valence MD study*”.
- “*Temperature-controlled spectral tuning of citric-acid-derived full-color carbon dots for white light-emitting diodes*” ACS Applied Materials and Interfaces (under review)
- Bhusankar Talluri, Edamana Prasad, and **Tiju Thomas**, “*Ultra-small ($r < 2$ nm), stable (> 1 year), mixed valence copper oxide quantum dots with anomalous band gap*”, [arXiv:1706.01261](https://arxiv.org/abs/1706.01261) (2017)
- Santanu Maiti and **Tiju Thomas**, “*Broadband-UV, hybrid-organic-photodetector containing chemically-treated ZnMgO layer with promising detectivity, responsivity and low dark current*” (under preparation)
- 2 papers with SREC collaborators on colloidal and interface science; many with students of the group at IITM.

Manuscripts under preparation (with IITM affiliation)

“*Nanocrystalline multicomponent equiatomic rare earth oxides as new hydrogen storage systems*”, Abhishek Sarkar, Christoph Loho, **Tiju Thomas**, Subramshu S. Bhattacharya, Horst Hahn, and Ruzica Djendjelic (under preparation)

“*Phase behavior of ultra-small, stable, digestively ripened, ZnO QDs ($r < 2$ nm) in discotics*”, Bhusankar Talluri, Niya Mary, Sandeep Kumar, and **Tiju Thomas**, (under preparation)

“*Barium tantalum oxides: phase stability and optical band gap studies on solution-combustion derived systems, and band structure evaluations*”, Kousika A, R Harikrishna, and **Tiju Thomas**

“*Nitridation kinetics in solution-derived barium tantalum oxides and systematic study of band structure modification through high pressure nitridation*”, Kousika A, R Harikrishna, and **Tiju Thomas**

“Barium tantalum oxynitride: thermophysical computations and empirical dielectric dispersion studies”, Kousika A, R Harikrishna, and **Tiju Thomas**

“Electronic structure modification of BiVO_4 through high pressure, ammonothermal processing for photoanode applications”, A Malek, A Kousika, Bhusankar T, **Tiju Thomas**

“Gadolinium doped sodium bismuth titanate – optical and spectrochemical investigation”, Santosh Behera Kumar, Lalitha G, et al

“Systematic optical property investigation in $\text{Na}_{0.5}\text{Bi}_{0.5-x}\text{Eu}_x\text{TiO}_3$ ”, WojciechJadwicienczak, PraveenaKuruva, and **Tiju Thomas**, (under preparation)

“Ab-initio studies on thermoelectric properties of Eu doped sodium bismuth titanate”, Mousumi U. Kahaly, and **Tiju Thomas** (under preparation)

“Photocatalytic disinfection of water from Nairobi using Cu doped ZnO”, Vincent O. Madadi, **Tiju Thomas**, and Shem O Wandiga, (under preparation)

“Atmospheric pressure dielectric breakdown as a means of recycling water remediation materials”, Yoon Kee Kim, and **Tiju Thomas**, (under preparation)

“Photoluminescence studies on calcium tungstates”, R Harikrishna, BM Nagabhushana and **Tiju Thomas**

"Nano Si and Si: CNT in-situ, arc-discharge synthesis and electrochemical characterization", Sneha S, Madhubala, Raja A, Bhusankar T, Kousika A, **Tiju Thomas**

Papers on (i) replacement of sodium borohydride in amalgam based hydrolytic processes, (ii) QD seeded monodisperse nanoparticles, (iii) QD-polymer **electrospun composites for electrochemical liquid phase sensing**, (iv) unified **mechanistic modeling** of DR in ceramic nanoparticles (Lee-Clark hybrid model; anisotropy; enthalpic and electrostatic corrections; defect chemistry; predictive modeling), (v) Bond Valence method for **sintering dynamic simulations** in complex ceramic, (vi) As sensor using rGO/MnOx system, (vii) band gap engineering in Bismuth oxide derivatives and photoactive aluminates – **electronic structure/ab initio studies** and engineering simulations, (viii) As detection and remediation technologies – materials and **nano-biotechnology** approaches

A review articles on (i) “Synthesis of pnictide and chalcogenide superconductors” and “Oxynitride and multiphase materials for supercapacitor applications” is underway.

(more Malek, Kousika, Bhusankar, Santosh, Tanvi, Dr.Sudhapriyanka collaborations planned)

Conference publications

1. Jingzhou Wang, PraveenaKuruva, **Tiju Thomas**, Wojciech M. Jadwisienczak, “Optical

Studies of Na_{0.5}Bi_{0.5-x}Eu_xTiO₃ Perovskite Red Phosphor with High Europium Content’, International Workshop on Advanced Spectroscopy and Optical Materials, Gdańsk, Poland (July 2013) (peer reviewed paper).

2. Arun D Rao, Suresh Karalatti, Arul Varman K, **Tiju Thomas** and Praveen C Ramamurthy, “*Organic solar cell using vertically aligned nanostructured ZnO nanorods*”, IEEE Conference, Boston, US.A (July 2013). (**Invited Contribution**) (peer reviewed paper)

3. Jingzhou Wang, Praveena Kuruva, **Tiju Thomas**, Adam Brant, Wojciech M. Jadwisieniczak, “*Optical Characterization of Eu Doped Mixed A-site Perovskite Na_{0.5}Bi_{0.5}TiO₃ Red Phosphor*”, International Conference on Rare Earths, Ganzhou City, Jiang Xi Province, China (August 2013). (peer reviewed paper)

4. Xiaomei Guo, **Tiju Thomas**, Kewen K. Li, Jifa Qi, Yanyun Wang, Xuesheng Chen, Michael G. Spencer, Hua Zhao, Kevin Y. Zou, Hua Jiang and Baldassare D. Bartolo, “*Size reduction and rare earth doping of GaN powders through ball milling*”, MRS Proceeding, **1202**, 1202-109-12 (2009).

5. Wojciech M. Jadwisieniczak, Saleem Ramadan, Tiju Thomas, Michael G. Spencer, Nelson Y. Garces, Evan R. Glaser and Krzysztof Wisniewski, “*Luminescence and Excitation Mechanisms of Eu-doped GaN Phosphors*”, MRS Proceedings, **1111**, 1111-D02-07 (2009).

6. **Tiju Thomas**, MVS Chandrashekhar, Carl B. Poitras, Junxia Shi, Jesse C. Reiherzer, Francis J. DiSalvo, Michal Lipson and M. G. Spencer, “*Photoluminescence enhancement in Eu doped GaN powder by oxidative passivation of the surface*”, MRS Proceedings, **1111**, 1111-D04-01 (2008).

7. 2 papers by Bhusankar and Kousika in IIT Roorkee Materials conference (to appear soon)

Book chapters

- Sritama, Tanvi Gupte, Jenifer, **Tiju Thomas**, T. Pradeep, “*Arsenic in water: fundamentals of measurement and remediation*” in Encyclopedia of Water: Science, Technology, and Society (Wiley, 2018) (Book chapter, peer reviewed, and submitted on invitation)
- Sritama, Tanvi Gupte, Jenifer, **Tiju Thomas**, T. Pradeep, “*Arsenic in Water: Speciation, Sources, Distribution, and Toxicology*” in Encyclopedia of Water: Science, Technology, and Society (Wiley, 2018)