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36. Tapendu Mandal, B.K. Mishra and Ashish Garg and D. Chaira, Optimization of process variables for the mechanosynthesis of nanocrystalline hydroxyapatite

37. A. Roy, S. Auluck, R. Prasad and Ashish Garg, Orientation Dependence of Optical Properties of epitaxial $Bi_4Ti_3O_{12}$ thin films: an experimental and theoretical study

38. P.Yousaf Khan and Krishanu Biswas, "Melting and Solidification Behaviour of Bi-Pb Multiphase Alloy Nanoparticles Embedded in Aluminum Matrix", J. Nanscience and Nanotechnology (2013)

39. Sumanta Samal, Ajit Misra, Krishanu Biswas and Govind; "Mechanical Properties of Novel Ti-Al-Cu-Co-Fe High Entropy Alloys", Materials Science Forum (2013)

40. P.Yousaf Khan and Krishanu Biswas, "Effect of Matrix on Melting and Solidification Behaviour of Pb-Sn Embedded Alloy Nanoparticles", Phil Magz.. (2013)

41. H,Kumar, P.Ghosh and Krishanu Biswas, "Fly ash and kaolinite-based geopolymer: processing and geotechnical property", J. Materials in Civil Engg.(2013)

42. Sumanta Samal, Priya Gautam, Swapnil Agarwal Krishanu Biswas and Govind; "Microstructural evolution of ultrafine Ti-Fe-Co alloys", Materials Science Forum(2013)

43. Sumata Samal and Krishanu Biswas; "Microstructural evolution in novel suction cast Ti-Fe-Co alloys", Mater. and Metall. Trans. A. (2013)

Mathematics and Statistics

44. A. Ganguly, D. Kundu and Sharmishtha Mitra. "Bayesian Analysis of Simple Step-Stress Model under Weibull Lifetimes";

45. D. Samanta, A. Ganguly, D. Kundu and Sharmishtha Mitra. "Order Restricted Bayesian Inference for Exponential Simple Step-Stress Model".

Mechanical Engineering

46. Deepak Khurana, Avinash Kumar Agarwal, "Experimental Evaluation of Oxidation Stability and Effect of Various Antioxidants on Biodiesel from Karanja (Pongamia pinnata), Neem (Azadirachta indica) and Jatropha (Jatropha curcas) Oils", submitted to FUEL on 24th October 2013 (Ref. No. JFUE-S-13-02374.pdf).

47. Mergel,J. C., Sauer, R. A.,and Saxena, A, 2013, "Computational optimization of adhesive microstructures based on a nonlinear beam formulation," Structural and Multidisciplinary Optimization, submitted.

48. Goswami, M., Saxena, A. and Munshi, P, 2012, “On Optimal, Efficient and Reliable Reconstruction from LVT Data using the PI grid,” Measurement Sciences and Technology, revised

49. Nath D. and Kalra M. S.,"Solution of Grad-Shafranov Equation by Method of Fundamental Solutions" Journal of Plasma Physics, Manuscript ID PLA-RA-2013-0109.

Physics

50. Dynamics of electrically polarized magnetic monopoles in spin ice.

51. Revisiting Second Law of thermodynamics in a reversible magnetic refrigeration cycle.

52. Heavy Fermion Behavior in Kondo Lattice Itinerant Ferromagnet $CeCrGe_3$ D. Das, T. Gruner, H. Pfau, U.B. Paramanik, U. Bukhardt, C. Geibel, Z. Hossain

INVITED TALKS DELIVERED

Biological Sciences and Bio-engineering

1. Dhirendra S Katti In vitro tumor engineering using 3D scaffolds, International Conference on Design of Biomaterials 2012, IISc Bengaluru, India 9-11th December, 2012

Chemistry

2. Department of Organic Chemistry, IISc Bangalore, April 26, 2012
3. School of Chemistry, University of Hyderabad, Hyderabad (July 31, 2012)
4. Department of Chemistry, IIT Kharagpur, Kharagpur (December 21, 2012)
5. Institute of Chemistry and Biochemistry, Freie Universität, Berlin, Germany on June 03, 2013.
6. Institut für Anorganische und Analytische Chemie, Technische Universität, Braunschweig, Germany on May 29, 2013.
7. Department of Chemistry and Pharmacy, Friedrich-Alexander-University Erlangen-Nuremberg, Germany on May 13, 2013.
8. Institut für Anorganische Chemie, Georg-August-Universität Göttingen Tammannstrasse 4, Göttingen, Germany on April 23, 2013
9. Institut für Anorganische Chemie, Technische Universität Kaiserslautern, Germany on March 07, 2013.
10. Institut für Anorganische Chemie, Karlsruher Institut für Technologie, Germany on February 04, 2013.
11. Department of Chemistry and Earth Sciences, Heidelberg University, Germany on January 08, 2013.
12. Bioinorganic Chemistry Zing Conference held on Lanzarote, Spain during February 19-22, 2013.
13. Lecture Workshop on Bioinorganic Chemistry and its Application sponsored by National Science Academies held on School of Chemistry, Madurai Kamaraj University, Madurai-625021 during September 28-30, 2012.
14. ChemFest, Department of Chemistry, IIT Kanpur on September 1, 2012.

Electrical Engineering

15. Invited talks on ‘Smart Grid Activities at IIT Kanpur’ and ‘Indian Power Sector: Present Scenario & Smart Grid Initiatives’ in DST-EPSRC Indo-UK Joint workshop on ‘Smart Energy Grids and Storage’, 27-29 June, 2012, Bath, UK.
16. Invited talk on ‘Smart Grid Initiatives in India and Research on Synchrophasor Based WAMPCS At IIT Kanpur’ in DST-NWO Indo-Dutch Joint Workshop on ‘Smart Grid’, TU Delft, Netherlands, 24-27 September, 2012.
17. Invited talk on ‘Synchrophasor Based Wide Area Monitoring & Control System’ in 17th National Power Systems Conference (NPSC), 12-14 December, 2012, at IIT(BHU), Varanasi.

Materials Science and Engineering

18. Monica Katiyar, "Materials engineering in daily life: Case for organic electronics", 7th National Frontiers of Engineering Symposium organized by INAE, 12 - 14 October 2012, Guwahati

19. Monica Katiyar, "Inkjet printed organic thin film transistors: Achievements and Challenges", International conference on advanced materials processing- challenges and opportunities (AMPCO2012), 2-3 November 2012, Roorkee,

Mechanical Engineering

20. Lecture 1: INTRODUCTION TO INVERSE METHODS; Lecture 2: APPLICATIONS OF INVERSE TECHNIQUES, presented at the Department of Mechanical Engineering, IIT Roorkee, 2nd July 2012.

21. EXTRACTING DATA FROM IMAGE SEQUENCES USING INVERSE TECHNIQUES, Plenary Lecture at the National Workshop on Image Processing Applications in Industry, Medicine, and Aerospace, organized by DRDL Hyderabad held at the Research and Innovation Center, IITM research Park during 28-29 December 2012.

22. MODELING METHANE PRODUCTION FROM A HYDRATE RESERVOIR VIA SIMULTANEOUS DEPRESSURIZATION AND CO2 SEQUESTRATION, Keynote Lecture at the Gas Hydrates Symposium held at National Institute of Oceanography, Goa on 18th January 2013

23. IMAGING UNSTEADY THREE DIMENSIONAL FLUID FLOW AND TRANSPORT PHENOMENA, Plenary lecture at the National Laser Symposium-21 held at BARC Mumbai during 6-8 February 2013.

24. OPTICAL MEASUREMENT TECHNIQUES IN THERMAL SCIENCES, Invited Lecture delivered at BR Ambedkar NIT-Jalandhar, 22nd April 2013.

25. FUNDAMENTALS AND MODELING OF DROPWISE CONDENSATION, three Invited Lectures delivered at IIT Roorkee, 24th June 2013.

Physics

26. International Conference on Nuclear Theory in Supercomputing Era-2013 (NTSE-2013), Iowa State Univ, Ames, USA, May 13-17, 2013.

27. International Conference on Light Cone Physics (LC-2012): Hadron and Particle Physics, Delhi, India, 10-15 Dec, 2012.

28. Invited Talk "Competition between magnetism and superconductivity in an underdoped Iron Pnictide Superconductor" 14th International Workshop in Vortex Matter in Superconductors, May 21 - 28, Nanjing, China.

29. Invited Talk "Detecting ultra small changes in magnetization associated with phase transition in superconductors and the development of sensitive metallic nanocantilevers" 6th India - Singapore Joint Physics Symposium (ISJPS - 2013) at IIT Kharagpur, between February 25 -27, 2013.

30. Invited Talk "Advances in magneto-optical imaging" at Punjab University 7th Chandigarh Science congress (CHASCON), from March 1-3, 2013.

31. Invited Talk “Magneto-Optical imaging of competing order parameters in pnictide superconductor”, at the 5th Indo – Singapore Joint Symposium at IIT Delhi 20th – 22nd Feb. 2012.

32. Invited Talk "Competition between magnetism and superconductivity in an under-doped iron arsenide superconductor" at International Conference on Functional Oxides and New carbon materials, S. N. Bose Center for Basic Sciences, Kolkata, May 8th, 2012.

33. Colloquium, "Exploring the coexistence of order parameter and a search for broken symmetry in the vortex state of superconductors", Department of Physics, IIT Kanpur, Jan. 20, 2012.

CONTINUING EDUCATION ACTIVITIES

Civil Engineering

1. Kaul, D.S., Tarun Gupta and S.N. Tripathi, 2012, Chemical and microphysical properties of the aerosol during foggy and nonfoggy episodes: A relationship between organic and inorganic content of the aerosol, Atmospheric Chemistry and Physics Discussion, 12, 14483-14524.

2. Michael, M., A. Yadav, S.N. Tripathi, V.P. Kanawade, A. Gaur, P. Sadavarte and C. Venkataraman, 2013, Simulation of trace gases and aerosols over the Indian Domain: Evaluation of the WRF-Chem model, Atmospheric Chemistry and Physics Discussion, 13, 12287-12336. Renard, J.B., S.N. Tripathi, et al., 2013, In situ detection of electrified aerosols in the upper troposphere and in the stratosphere, Atmospheric Chemistry and Physics Discussion, 13, 7061-7079.

Computer Science and Engineering

3. Problem Generation and Solution Generation for Natural Deduction presented at Microsoft Research Redmond Lab Open House, June 18, 2013.

4. Functional SMT solving with Z3 and Racket, Siddharth Agarwal and Amey Karkare, 2012 Symposium on Trends in Functional Programming (TFP 2012), University of St Andrews, UK, June 12-14, 2012.