

## (25) Electron Microscopy and Scanning Probe Microscopy

Chair :

**Ravishankar N**

Materials Research Centre  
Indian Institute of Science  
Bangalore 560 012, India  
Email: [nravi@mrc.iisc.ernet.in](mailto:nravi@mrc.iisc.ernet.in)

**Jaydeep Basu**

Department of Physics  
Indian Institute of Science  
Bangalore 560012, India  
Email: [basu@physics.iisc.ernet.in](mailto:basu@physics.iisc.ernet.in)

Co-Chairs :

**Ranjan Datta**

Jawaharlal Nehru Centre for Advanced Scientific Research  
Jakkur P.O  
Bangalore 560 064, India  
Email: [ranjan@jncasr.ac.in](mailto:ranjan@jncasr.ac.in)

**Raju V. Ramanujan**

School of Materials Science and Engineering  
Blk N4.1 , #01 18  
50 Nanyang Avenue  
Nanyang Technological University  
Singapore 639798  
Email: [Ramanujan@ntu.edu.sg](mailto:Ramanujan@ntu.edu.sg)

**Kenji Kaneko**

Department of Materials Science and Engineering  
Faculty of Engineering  
Kyushu University  
744, Motooka, Nishi  
Fukuoka, 819 0395, Japan  
Email: [kaneko@zaiko.kyushu-u.ac.jp](mailto:kaneko@zaiko.kyushu-u.ac.jp)

**Yamada H**

Electronic Material Science and Engineering Laboratory  
Kyoto University, Japan  
E-mail: [h-yamada@kuee.kyoto-u.ac.jp](mailto:h-yamada@kuee.kyoto-u.ac.jp)

## (25) Electron Microscopy and Scanning Probe Microscopy

### DETAILED PROGRAMME

Monday, 16-12-2013

#### Session I : 10.15 – 11.15

|                                   |                                                                                                         |                                                                                                       |
|-----------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 10.15 - 10.45<br>Invited Talk (1) | <u>Kenji Kaneko</u>                                                                                     | <b>ABS - 775 - ICA</b><br>Three-Dimensional Electron Tomography for Materials Science and Engineering |
| 10.45 - 11.00<br>Invited Talk (2) | <u>A.K.Srivastava</u> , S. Muthiah<br>S. Bathula, D.K. Misra,<br>B. Gahtori, A.Dhar and<br>R.C. Budhani | <b>ABS - Email - ICA</b><br>Understanding of microstructures in thermoelectric materials              |

#### Session II : 11.45 – 13.15

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|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11.45 - 12.15<br>Invited Talk (3) | <u>T. Tanji</u>                                                                                                                                                      | <b>ABS - 1068 - ICA</b><br>Electron Holography of Interfaces between Metal and Oxide Ionic Conductor                                                                         |
| 12.15 - 12.30<br>Oral (1)         | <u>Minoru Nishida</u><br>Yohei Soejima<br>Masatoshi Mitsuhashi<br>and Tomonari Inamura                                                                               | <b>ABS - 1002 - ICA</b><br>Multiscale Visualization of Self-Accommodation<br>Morphology of B19' Martensite in Ti-i Shape Memory Alloy                                        |
| 12.30 - 12.45<br>Oral (2)         | <u>S. Panda</u><br>S. C. Mishra<br>S. Suwas &<br>S. K. Sahoo                                                                                                         | <b>ABS - 1084 - ICA</b><br>Annealing Texture in Commercial Pure Titanium                                                                                                     |
| 12.45 - 13.00<br>Oral (3)         | <u>Xiaoxia Gao</u><br>Qun Li<br>Qing Wang and<br>Chuang Dong                                                                                                         | <b>ABS - 370 - ICA</b><br>Transmission Electron Microscope(TEM)investigation of the critical controlling condition of Omega phase precipitation in Metastable Titanium Alloy |
| 13.00 - 13.15<br>Oral (4)         | <u>Srinivasan Swaminathan</u><br>T. Vishwanath<br>Balaji Srinivasan<br>Mallikarjun<br>Karadge, Dustin Ellis<br>Mel Esmacher<br>Martin Morra<br>Saratchandra Shanmukh | <b>ABS - 1661 - ICA</b><br>Microstructural Characterization of CP Ti Gr 2 Welds                                                                                              |

#### Session III : 16.00 – 18.15

|                                   |                                                                                                     |                                                                                                                                                           |
|-----------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16.00 - 16.30<br>Invited Talk (4) | <u>S. Hata</u> , T. Nakano,<br>U.D. Kulkarni, A. Arya,<br>P.S. Ghosh, G.K. Dey,<br>and H. Nakashima | <b>ABS - 1068 - ICA</b><br>Long-Period Superstructures and their Ordering behaviour in Al-Rich TiAl Alloy: Seeing Nanostructure Apart from Phase Diagrams |
| 16.30 - 17.00<br>Invited Talk (5) | <u>Litao SUN</u>                                                                                    | <b>ABS - Email - ICA</b><br>Setting up a Nanolab inside a TEM for nanoresearch                                                                            |

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| 17.00 - 17.15<br>Oral (5) | <u>Pavana S.V. Mocherla</u><br>C. Karthik<br>R. Ubic<br>M. S. Ramachandra Rao<br>and C. Sudakar | <b>ABS - 228 - ICA</b><br>Microstructural investigations of Ca doped BiFeO <sub>3</sub> nanoparticles by highresolution transmission electron microscopy |
| 17.15 - 17.30<br>Oral (6) | <u>Chanchal Ghosh</u><br>Joysurya Basu<br>Divakar Ramachandran<br>and E Mohandas                | <b>ABS - 726 - ICA</b><br>Direct Structural Imaging and V Substitution in doped TiCr <sub>2</sub> Cubic Laves Phase                                      |
| 17.30 - 17.45<br>Oral (7) | <u>Shunichi Arisawa</u><br>Kyungsung Yun<br>and Ienari Iguchi<br>Kazuhiro Endo                  | <b>ABS - 718 - ICA</b><br>Alignment of Quantized Magnetic Flux around Grain Boundary Observed by Scanning SQUID Microscopy                               |
| 17.45 - 18.00<br>Oral (8) | <u>R. Batabyal</u><br>J. C. Mahato<br>Debolina Das<br>Anupam Roy<br>and B. N. Dev               | <b>ABS - 1195 - ICA</b><br>Inducing Growth and Real Time Imaging of Fractal Nanostructures by a Scanning Tunneling Microscope                            |
| 18.00 - 18.15<br>Oral (9) | <u>A. Rath</u><br>J. K. Dash<br>R. R. Juluri<br>A. Rosenauer<br>and P. V. Satyam                | <b>ABS - 1480 - ICA</b><br>Electron Microscopy study on the formation of epitaxial Au-Ge nano structures on ultra clean surfaces                         |

**Tuesday, 17-12-2013**

**Session IV : 10.15 – 11.15**

|                                   |                                              |                                                                                                          |
|-----------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 10.15 - 10.45<br>Invited Talk (6) | <u>Raju V. Ramanujan</u>                     | <b>ABS - 866 - ICA</b><br>Electron Microscopy of Magnetic Fluids                                         |
| 10.45 - 11.00<br>Invited Talk (7) | <u>Masaki Tanaka,</u><br>and Kenji Higashida | <b>ABS - 781 - ICA</b><br>Multiplication process of crack tip dislocations revealed with HVEM-tomography |

**Poster Session :**

**Tuesday, 17-12-2013, 14.00 - 15.30**

|                  |                                                                                                  |                                                                                                                             |                        |
|------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------|
| 25 - Poster - 01 | Tapan Kumar Das<br>Pavana S.V. Mocherla<br>C. Sudakar                                            | Microstructural and optical studies on ordered and disordered porous TiO <sub>2</sub> nanostructures with CdSe quantum dots | <b>ABS - 303 - ICA</b> |
| 25 - Poster - 02 | P. Mukhopadhyay<br>K. P. Balan<br>M. Srinivas and<br>M. Roy                                      | Microstructural features developed during erosion and abrasion of bearing steels                                            | <b>ABS - 424 - ICA</b> |
| 25 - Poster - 03 | K. P.Remya<br>M. Gupta<br>S. Amirthapandian<br>B. K. Panigrahi<br>D. Mangalaraj<br>N. Ponpandian | Microstructural and Magnetic Studies of Ion Beam Sputtered SmCo Thinfilm                                                    | <b>ABS - 468 - ICA</b> |

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| 25 - Poster - 04 | G. Mangamma<br>M. Kamruddin<br>S. Dash and A. K.Tyagi                                   | Local electromechanical response of Cu-doped nanocrystalline ZnO                                                                       | <b>ABS - 897 - ICA</b>  |
| 25 - Poster - 05 | Prasana Sahoo<br>Monica A. Cotta<br>Nelson Duran<br>and Mahendra Rai                    | Exploring the kinetic pathways of biogenically synthesized antimicrobial silver nanoparticles by Kelvin probe force microscopy         | <b>ABS - 1272 - ICA</b> |
| 25 - Poster - 06 | Aditya Kumar<br>Shashank Shekhar<br>Shubham Jain<br>Deepa Mudgal<br>Satya Prakash       | Microstructural Characterisation of Hot Corroded D-gun sprayed Stellite-6 coating on Superni 600 at 900°                               | <b>ABS - 1361 - ICA</b> |
| 25 - Poster - 07 | P. Jegadeesan<br>S. Amirthapandian<br>Gurpreet Kaur<br>Sharat Chandra<br>B.K. Panigrahi | Electron energy loss spectra of $Y_2Ti_2O_7$ and $Y_2TiO_5$ : A comparative study between experiments and first principle calculations | <b>ABS - 1645 - ICA</b> |