

## **(22) Light Metals and Super Alloys**

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## (22) Light Metals and Superalloys

### DETAILED PROGRAMME

Wednesday, 18-12-2013

#### Session I : 10.15 – 11.15

10.15 - 10.45 Invited Talk (1)	S.N. Sahu and <u>A.A. Gokhale</u>	<b>ABS - Email - ICA</b> Prediction and validation of bubble size distribution in aluminium foam
10.45 - 11.15 Invited Talk (2)	<u>K. Tsuchiya</u> , B.Z. Jiang and S. Emura	<b>ABS - Email - ICA</b> Effect of Severe Plastic Deformation on $\alpha+\beta$ Duplex Structure Formation in Ti-5Al-5Mo-5V-3Cr Alloy

#### Session II : 11.45 – 13.15

11.45 - 12.15 Invited Talk (3)	<u>Toshiji Mukai</u>	<b>ABS - Email - ICA</b> Grain Refinement and Textue Modification of Magnesium Alloys for improving Mechanical Performance
12.15 - 12.45 Invited Talk (4)	<u>Satyam Suwas</u> , R.K. Sabat, R.K. Mishra	<b>ABS - Email - ICA</b> Evolution of texture in Magnesium alloys through severe plastic deformation process
12.45 - 13.00 Oral (1)	<u>Amitava Moitra</u>	<b>ABS - 116 - ICA</b> Atomistic simulations to design novel Mg alloys
13.00 - 13.15 Oral (2)	<u>B. Nagasivamuni</u> Jayakrishnan Nampoothiri P. Mohana sivam K. R. Ravi	<b>ABS - 989 - ICA</b> Grain Refinement of Beryllium Added Mg-3Al Alloys by Carbon Inoculation Technique Activated Using Ultrasonic Melt Treatment

Friday, 20-12-2013

#### Session III : 10.15 – 11.15

10.15 - 10.45 Invited Talk (5)	<u>Shigeharu Kamado</u>	<b>ABS - Email - ICA</b> Development of Commonly-used Heat Treatable Magnesium Alloys for High Speed Extrusion
10.45 - 11.00 Oral (3)	Johan Bratberg Lina Kjellqvist Huahai Mao Anders Engström Paul Mason Qing Chen Andreas Markström Hailin Chen <u>Åke Jansson</u>	<b>ABS - 206 - ICA</b> The development and validation of a new thermodynamic database for Ni based alloys.
11.00 - 11.15 Oral (4)	<u>Amlan Kar</u> Satish V. Kailas Satyam Suwas	<b>ABS - Email - 1 - ICA</b> Metallurgical study of aluminum-titanium welding by friction stir welding (FSW)

**Session IV : 11.45 – 13.15**

11.45 - 12.15 Invited Talk (6)	<u>Shae K. Kim</u>	<b>ABS - Email - ICA</b> Importance of Cleanliness for Mg Alloys
12.15 - 12.45 Invited Talk (7)	<u>Subodh Kumar</u>	<b>ABS - Email - ICA</b> Development of an aluminium alloy with room temperature and elevated temperature strength
12.45 - 13.00 Oral (5)	<u>Yang Guangyu</u> Fan Junkai Liu Shaojun Jie Wanqi Zhang Jun	<b>ABS - 1270 - ICA</b> Isothermal Grain Coarsening of Extruded Mg-5.5Zn 2Gd-0.6Zr Magnesium Alloy by the Simple Strain Induced Melt Activation Process
13.00 - 13.15 Oral (6)	<u>Rajnish Goyal</u> B.Venkataraman S.N. Sahu and Amol A. Gokhale	<b>ABS - 597 - ICA</b> Energy Absorption in Aluminium Foam under Ball Impact and Perforation

**Session V : 14.00 – 15.30**

14.00 - 14.30 Invited Talk (8)	Alok Singh, Yoshiaki Osawa Hidetoshi Somekawa and <u>Toshiji Mukai</u>	<b>ABS - Email - ICA</b> Effect of microstructure on strength and ductility of high strength extruded Mg-Zn-Y alloys
14.30 - 14.45 Oral (7)	<u>Arup Dasgupta</u> Pragna Bhaskar V Subramanya Sarma and Saroja Saibaba	<b>ABS - 121 - ICA</b> Characteristics of ultra-fine-grain structured Ti alloy
14.45 - 15.00 Oral (8)	<u>B Saha</u> M Sai Krishna Rao D B Anant sagar Ch. Ramakrishna & N Eswara Prasad	<b>ABS - 656 - ICA</b> Airworthiness Certification of Beta Titanium Alloy for an Indigenous Military Aircraft
15.00 - 15.15 Oral (9)	<u>Sumit Bahl</u> Kaushik Chatterjee Satyam Suwas	<b>ABS - Email - 2 - ICA</b> Role of crystallographic texture in designing bio implants with commercially pure titanium
15.15 - 15.30 Oral (10)	<u>Pardhu Yella</u> Venkateswarlu Pinnoju Koteswararao V. Rajulapati Prem Kiran Pathuri K. Bhanu Sankara Rao	<b>ABS - 1033 - ICA</b> Structural Characterization of Laser treated SS304 and SS316L(N) plates

**Session VI : 16.00 – 18.00**

16.00 - 16.30 Invited Talk (9)	<u>H. Miura</u>	<b>ABS - Email - ICA</b> Fabrication of Ultrafine Grained Mg alloys by Multi-Directional Forging and the Specific Mechanical Properties
16.30 - 16.45 Oral (11)	<u>Pardhu Yella</u> Kamal Mankari Rahul Koteswararao V. Rajulapati K. Bhanu Sankara Rao	<b>ABS - 1033a - ICA</b> Structure - Property correlations of a newly developed Alloy 740

16.45 - 17.00 Oral (12)	<u>Xiping Guo</u> Jing Li Ping Guan	<b>ABS - 1010 - ICA</b> Microstructure and Oxidation Behaviors of Al, Y Modified Silicide Coatings Prepared on an Nb-Ti-Si Based Ultrahigh Temperature Alloy
17.00 - 17.15 Oral (13)	<u>Lin Liu</u>	<b>ABS - 21 - ICA</b> Grain Selection and Stray Grain Formation of Nickel Based Single Crystal Superalloys
17.15 - 17.30 Oral (14)	<u>M. Naginia</u> , R. Vijaya M. Ramakrishna Koteswararao V. Rajulapati K. Bhanu Sankara Rao A.V. Reddy and G. Sundarajan	<b>ABS - 1203 - ICA</b> Effect of Milling on Microstructural Evolution of Oxide Dispersion Strengthened 18Cr Nano Ferritic Steels
17.30 - 17.45 Oral (15)	<u>K. K. Mahesh</u> and F. M. Braz Fernandes	<b>ABS - 1281 - ICA</b> Superelasticity and thermal phase transformations in Ni-Ti alloy
17.45 - 18.00 Oral (16)	K. Ramakrishna and <u>Manjunatha Pattabi</u>	<b>ABS - Email - ICA</b> Non-linear Thermal Expansion in NiTi Shape Memory Alloy

**Poster Session :**

**Wednesday, 18-12-2013, 14.00 - 15.30**

22 - Poster - 01	Deepa Mudga Surendra Singh Satya Prakash	High temperature corrosion behaviour of some Superalloys under molten salt environment.	<b>ABS - 306 - ICA</b>
22 - Poster - 02	G. Panneerselvam M.P. Antony and K.Nagarajan	Synthesis, Characterization and Thermal expansion studies on ThO <sub>2</sub> - YO <sub>1.5</sub> solid solutions	<b>ABS - 375 - ICA</b>
22 - Poster - 03	S. Ramesh Kumar Rahul K. V. Rajulapati G. M. Reddy and K. Bhanu Sankara Rao	Fabrication of Bulk Ultra Fine Grained Al-Cu Alloy Using Friction Stir Processing	<b>ABS - 510 - ICA</b>
22 - Poster - 04	B. Naga Jeevani M. Bathrinarayanan S. Ramesh Kumar Rahul, K. V. Rajulapati G. M. Reddy and K. Bhanu Sankara Rao	Strain Hardening Characteristics in Bulk Ultra Fine Grained Al-Cu Alloy Studied by Macro and Micro Indentation	<b>ABS - 510a - ICA</b>
22 - Poster - 05	D. Sornadurai R. Ramaseshan S. Dash and N. Subramanian	Mechanical Properties Study on Zr <sub>1.5-x</sub> Ti <sub>1.5+x</sub> Al (x= 0.1, 0.2, 0.3, 0.4 and 0.5) Alloy Phases	<b>ABS - 860 - ICA</b>
22 - Poster - 06	Murari M S Manjunatha Pattabi	The Effect of Cold Roll and Heat Treatment on the Phase transformation Temperature of NiTi Shape Memory Alloy	<b>ABS - 869 - ICA</b>

22 - Poster - 07	Nandini and A. Nityananda Shetty	Corrosion inhibition of light-weight magnesium alloy ZE41 by anionic surfactant laurate: An ecofriendly and economic approach.	<b>ABS - 877 - ICA</b>
22 - Poster - 08	Min-Sook Baek Dong -Joo Yoon Geum- Sik Kim Gee -Bin Kim Man-Bok Park Byung-II Kim	Titanium Alloy Design by Theoretical Calculation of the Bonding Order and the Energy Level of the Alloying Elements	<b>ABS - 1491 - ICA</b>
22 - Poster - 09	R.-H. Alison Kung M.-L.Ted Guo and Chi Y. A. Tsao	Synthesis of Mg-Cu-Y Bulk Metallic Glass Plate via Spray Forming Process	<b>ABS - Email - ICA</b>