

**The 7th International Conference on
Materials Processing for Properties and
Performance**

M³*P*
2008

05 November – 07 November 2008

Nanyang Executive Centre

SINGAPORE

Organised and Sponsored By:

Institute of Materials (East Asia)

Co-Organised By:

Singapore Institute of Manufacturing Technology

Supported By:

Nanyang Technological University, Singapore

Scope

The 7th International Conference on Materials Processing for Properties and Performance (MP³ 2008) will be held from **November 05 ~ 07, 2008**. It is organised and sponsored by the Institute of Materials (East Asia), co-organised by Singapore Institute of Manufacturing Technology and supported by Nanyang Technological University, Singapore. The purpose of this annual interdisciplinary conference is to showcase state-of-the-art developments in the processing, properties and performance of all classes of materials. The conference will provide an attractive forum for presenting the *latest advances in materials processing and materials evaluation*. Both invited and contributed papers will be included, invited speakers from leading academic and industrial research organisations will provide an overview of the current status as well as future directions of research. Contributed papers will address specific topics of current interest. Topics of interest include, but are not restricted to:

- *Symposium on Biomaterials for the 21st Century*
- *The Fourth Materials in Devices and Systems (MIDAS) Symposium*
- *Advanced Moulding and Forming Technologies*

Conference Organising Committee

Conference Chair



K. A. Khor
School of Mechanical & Aerospace Engineering,
Nanyang Technological University, Singapore
President, Institute of Materials (East Asia)

Symposium Chairmen



R. V. Ramanujan
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MIDAS Organising Committee (Chaired by Prof R.V. Ramanujan)

Chen Zhong, School of Materials Science and Engineering, NTU
C.L. Gan, School of Materials Science and Engineering, NTU
P.S. Lee, School of Materials Science and Engineering, NTU
V.M. Murukeshan, School of Mechanical and Aerospace Engg., NTU
K. Radhakrishnan, School of Electrical and Electronic Engg., NTU
A. Tok, School of Materials Science and Engineering, NTU
Prof. C.C. Wong, School of Materials Science and Engineering, NTU

Biomaterials for the 21st Century Organising Committee (Chaired by Prof. C.P. OOI)

Prof. K. L. Goh School of Chemical and Biomedical Engineering, NTU
Prof. S. Lim School of Chemical and Biomedical Engineering, NTU
Prof. L. P. Tan School of Materials Science and Engineering, NTU
Prof. D. A. Wang School of Chemical and Biomedical Engineering, NTU
Dr. Y. H. Zhu Institute of Chemical and Engineering Sciences, Ltd., A*STAR

Advanced Moulding & Forming Technologies Organising Committee (Chaired by Dr J. ZHAO)

Dr John Yong Singapore Institute of Manufacturing Tech, A*STAR
Dr Wang Zhiping Singapore Institute of Manufacturing Tech, A*STAR
Prof. X. Hu School of Materials Engineering, NTU
Prof X. Lu School of Materials Engineering, NTU
Prof M. Gupta Department of Mechanical Engineering, NUS
Prof Li Lin School of Mechanical and Aerospace Engineering, NTU
Dr Wang Zhenfeng Singapore Institute of Manufacturing Tech, A*STAR
Dr Li Xu Institute of Materials Research and Engineering, A*STAR
Dr Gu Yan Wei Singapore Institute of Manufacturing Tech, A*STAR

**Programme Schedule for
The 7th International Conference on Materials Processing for Properties
and Performance (MP³ 2008)**

and

The 3rd Asian Thermal Spray Conference

Day 1: 05 November 2008, Wednesday

Time	Programme
14:00-18:00	Registration, Venue: Auditorium Foyer
18:00-20:00	Reception

Day 2: 06 November 2008, Thursday

Time	Programme			
09.00-09.10	Welcome notes from conference chairmen; Venue: Auditorium			
09.10-09.50	Plenary Talk, Dr G Sundararajan: Cold Spray Coating Technology : Recent Developments at ARCI			
09.50-10.10	Tea break			
	Room: LR1	Room: LR2	Room: Auditorium Foyer	
10.10-12.10	MIDAS1	AMFT1	ATSC Registration	
12.10-13.00	LUNCH			
	Room: LR1	Room: LR2	Room: LR4	Room: LR5
13:00-15:30	BM1	AMFT2	ATSC1	
15.30-15.50	Tea break			
15:50-18:10	BM2	AMFT3	ATSC2	
19:00 -21:00	Banquet			

Day 3: 07 November 2008, Friday

Time	Programme			
	Room: LR1	Room: LR2	Room: LR4	Room: LR5
08.30-10.40	MIDAS2	AMFT4	ATSC3	ATSC7
10.40-11.00	Tea break			
11.00-12.10	MIDAS3	AMFT5	ATSC4	ATSC8
12.10-13.00	Lunch and Poster Session			
	Room: LR1	Room: LR2	Room: LR4	Room: LR5
13.00-16.00	MIDAS4	AMFT6	ATSC5	ATSC9
16.00-16.20	Tea break			
16.20-17.30		AMFT7	ATSC6	ATSC10

Note: Auditorium and Auditorium Foyer, level 2, Nanyang Executive Centre;
LR1&2: Lecture Room 1 and 2, Level 2, Nanyang Executive Centre;
LR4&5: Lecture Room 4 and 5, Level 3, Nanyang Executive Centre,
Nanyang Executive Centre, 60 Nanyang View, Singapore 639673
Location map: <http://www.ntu.edu.sg/nec/PublishingImages/roadmapfornecinblack.pdf>

Symposium on Advanced Moulding and Forming Technologies (AMFT)

Day 2: 06 Nov. 2008, Thursday

Room: Auditorium

09:00-09:10 Prof Michael Khor, Welcome address

Plenary Session: Chairman Michael Khor

09.10-09.50 **Plenary Talk, Dr G Sundararajan: Cold Spray Coating Technology: Recent Developments at ARCI**

09.50-10.10 Tea break

Oral Session, Room: Lecture Room 2

Session: Metal Composites Chair: **Dr. John Yong, A*STAR, SIMTech**

10.10-10.40

AMFT-7002 (Invited), **T Raja**

The influence of volume fraction of particulates on the mechanical - Fatigue characteristics of AL6082/SICP metal matrix composites: Effect of forging and ageing, SriVenkateswara College of Engineering, India, T. Raja, G. Thanigaiyarasu,

10.40-11.00

AMFT-7001 (Oral), **Yoichi Murakoshi**

Consolidation and Mechanical Property of AZ31 Chip Degreased with Super Heated Steam, National Institute of Advanced Industrial Science and Technologies (AIST), Japan, Yoichi Murakoshi, Kunio Matsuzaki, Muneharu Saigo, Hitoshi Ohya, Masahito Kimura

11.00-11.20

AMFT-7003 (Oral), **Shufeng LI**

Fabrication of ZrO₂(Y₂O₃)-Al₂O₃/Hydroxyapatite Nanocomposites Prepared by Spark Plasma Sintering, Nihon University, Japan, Shufeng Li, Hiroshi Izui, Michiharu Okano, Weihua Zhang, Taku Watanabe

11.20-11.40

AMFT-7019 (Oral), **Basava Kumar K G**

Dry sliding wear behavior of Al-7Si and Al-7Si-2.5Cu cast alloys, AleMS, India, K.G.Basavakumar, P G Mukunda, Vishnukant. S. Chatpalli and M Chakraborty

11.40-12.00

AMFT-7022 (Oral), **MADHAVI DAVE**

MICROSTRUCTURE OF MoS₂ SINGLE CRYSTALS BY USING CVT METHOD, SARDAR PATEL INSTITUTE OF APPLIED SCIENCES, India, Dr. MADHAVI DAVE

12.00-12.20

AMFT-7028 (Oral), **Pedram Jajarmi The effect of alloying and heat treatment on machinable austempered ductile iron, Tarbiat Moallem University of Sabzevar,, Iran, Pedram Jajarmi**

12.20-13.00 LUNCH

Oral Session, Room: Lecture Room 2

Session: Metal Process Chair: **Dr. Wang Zhiping, A*STAR, SIMTech**

13:00-13:30

AMFT-7010 (Invited), **Qiancheng Zhang**

Experimental and Simulated Compression Properties of Strain-hardened Pyramidal Lattice Structures, *Xi'an Jiaotong University, China*, Qiancheng Zhang, Yunjie Han, Aiping Chen, C. Chen, T.J. Lu

13:30-13:50

AMFT-7008 (Oral), **Patil Basavaraj V**

Effect of processing routes on material flow and strain inhomogeneity in Equal Channel Angular Pressing, *Indian Institute of Technology Madras, India*, Patil Basavaraj V, Uday Chakkingal and T S Prasanna Kumar

13:50-14:10

AMFT-7015 (Oral), **B. Yogesha**

Prediction of Forming Behaviour of Titanium Alloy by Artificial Neural Network (ANN), *Malnad College of Engineering, India*, B. Yogesha, Anusha Harish, Spoorthi K Gowda and S.S. Bhattacharya

14:10-14:30

AMFT-7021 (Oral), **Iman Farahbakhsh**

Influence of milling time and atmosphere on the Production of leaded brass in the presence of graphite using mechanochemical method, *Islamic Azad University of Qouchan, Iran*, I. Farahbakhsh, S. H. Tabaian, J. Vahdati

14:30-14:50

AMFT-7024 (Oral), **Anders E. W. Jarfors**

INFLUENCE OF PROCESSING CONDITIONS ON THE BULK MODULUS OF TI-SI-ZR BIOMATERIALS, *Singapore Institute of Manufacturing Technology, Singapore*, A. E. W. JARFORS, D. L. BUTLER, K. L. S. GOI

14:50-15:10

AMFT-7029 (Oral), **Surawut Yanil**

Relation Between Mode of Wrinkles and Drawbead Size in Rectangular Cup Deep Drawing, *King Mongkut's University of Technology North Bangkok, Thailand*, Surawut Yanil

15:10-15:30

AMFT-7033 (Oral), **K. NARASIMHA MURTHY**

Simulation of solidification patterns of permanent moulded Austempered Ductile Iron, *P. E. S. Institute of Technology, India*, K. NARASIMHA MURTHY, D.SETHURAM and UMA.T.R.

15.30-15.50 Tea break

Session: Surface Treatment Chair: **Prof Lu Xuehong, NTU**

15.50-16.20

AMFT-7039 (Invited), **Kotaro Hanada**

Shot coating of fine graphite powder for dry lubrication, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*, K. Hanada, K. Kikuchi, H. Takeishi, T. Sano

16.20-16.40

AMFT-7014 (Oral), **Y. WONGPRASERT**

Characteristic of CACVD Diamond Surface Layer by Hydrogen Termination, *King Mongkut's Inst. of Techn. Ladkrabang, Thailand*, Y. WONGPRASERT and *Burapha Univ., Thailand*, S. B. PONGSAI

16.40-17.00

AMFT-7016 (Oral), **Yongshan Tao**

EIS investigation on cold sprayed Al/a-Al₂O₃ deposits on AZ91D alloy, *Chinese Academy of Sciences, China*, Yongshan. Tao, Tianying. Xiong

17.00-17.20

AMFT-7034 (Oral), **Fatih KILIÇ**

Fabrication and characterization of Ni–SiC Metal Matrix Composite (MMC) nano-coatings by electrodeposition, *Sakarya University, Turkey*, Fatih KILIÇ, Harun GÜL, Serdar ASLAN, Ahmet ALP, Hatem AKBULUT

17.20-17.40

AMFT-7035 (Oral), **Harun GÜL**

Characteristics of Electrocodeposited Ni–Al₂O₃ Nano Particle Reinforced Metal Matrix Composite (MMC) Coatings, *Sakarya University, Turkey*, Harun GÜL, Fatih KILIÇ, Serdar ASLAN, Ahmet ALP, Hatem AKBULUT

17.40-18:00

AMFT-7037 (Oral), **BISWAJIT SAHA**

Structural and Tribological Properties of DLC Coatings Synthesized by dc Magnetron Cosputtering, *Singapore-MIT Alliance, NTU, Singapore*, B. Saha, N. W. Khun, S.B.Tor E. Liu, D. E. Hardt, Chun Jung Hoon.

18.00 – 18.20

BM-8012 (Oral), **R. ELANSEZHIAN**

INFLUENCE OF SURFACTANTS ON THE FRICTION AND WEAR BEHAVIOUR OF ELECTROLESS Ni – P COATINGS, *Indian Institute of Technology Madras, India*, R. ELANSEZHIAN, DR. B. RAMAMOORTHY, and DR. P. KESAVAN NAIR

19:00 -21:00 **Banquet**

Day 3: 07 Nov. 2008, Friday

Session: Polymer Process Chair: Prof Hu Xiao, NTU

08:30-09:00

AMFT-7007 (Invited), **Bala Kandasubramanian**

Nanohybrid composite bipolar plates of poly (ethersulphones) for Proton Exchange Membrane (PEM) fuel cell, *UK Materials Technology Research Institute, UK*, Bala Kandasubramanian

09:00-09:20

AMFT-7006 (Oral), **Bala Kandasubramanian**

Blown film extrusion of blends and compounds of polyolefin for synthetic paper applications, *UK Materials Technology Research Institute, UK*, Bala Kandasubramanian & D.D. Kale

09:20-09:40

AMFT-7013 (Oral), **D. V. Girish**

INFLUENCE OF SHORT GLASS FIBER REINFORCEMENT ON THERMOPLASTIC POLYMERS, *MCE, Hassan, India*, D. V. Girish, Attel Manjunath, Vasanth Kumar H S and Dayananda Jawali

09:40-10:00

AMFT-7018 (Oral), **Suzhu Yu**

Thermal and Mechanical Properties of Clay Reinforced Polyamide 6 Nanocomposites, *Singapore Institute of Manufacturing Technology, Singapore*, Suzhu Yu, Jianhong Zhao and Yang Kay Juay

10:00-10:20

AMFT-7026 (Oral), **Samarendra Maji**

New Aromatic Poly(ether amide)s Containing Phenolphthalein Anilide in the Main Chain, *Indian Institute of Technology, India*, Samarendra Maji; Suman Kumar Sen; Mahua Ganguly Dhara; Susanta Banerjee

10:20-10:40

AMFT-7027 (Oral), **Pradip Kar**

ISOMERIC EFFECTS ON THE STRUCTURES AND PROPERTIES OF POLYAMINOPHENOLS SYNTHESIZED IN BASIC MEDIUM, *Indian Institute of Technology, India*, Pradip Kar; Narayan C. Pradhan; Basudam Adhikari

10.40-11.00 Tea Break

Session: Machining Chair: **Dr. Zheng Hongyu, A*STAR, SIMTech**

11.00-11.30

AMFT-7031 (Invited), **K. NARASIMHA MURTHY**

Grindability Studies of manganese alloyed permanent moulded Austempered Ductile Iron, *P. E. S. Institute of Technology, India*, K. NARASIMHA MURTHY, J.B. SIMHA, and UMA.T.R

11:30-11:50

AMFT-7011 (Oral), **N. Muthukrishnan**

Performance Evaluation Of Peripheral Milling On Pearlitic Cast Iron, *Sri venkateswara College of Engineering, India*, N.Muthukrishnan, T.S.Rajan, Shyam Sundar

11:50-12:10

AMFT-7020 (Oral), **Stephen Yee**

Ming Wan SIMULTANEOUS RADIUSING AND POLISHING OF SMALL DIAMETER HOLES, *Singapore Institute of Manufacturing Technology, Singapore*, S Y M WAN and W S FONG, CAI JIAN FU and D L BUTLER

12.10-13.00 LUNCH and Poster Session

Session: Composites and Alloys

Chair: **Prof Li Lin**

13:00-13:30 AMFT-7012 (Invited), **Binchao Li**

Dynamic Performance of Polymer Foam-Cored Sandwich Panel Reinforced by Metallic Pyramidal Trusses, *Xi'an Jiao Tong University, China*, Binchao Li, Qiancheng Zhang & Tian Jian Lu

13:30-13:50

AMFT-7004 (Oral), **Chun-Lin Chu**

Microstructures and Mechanical Properties of a Mg-Li-Al-Zn Alloy as processed by Plastic Deformation Processes, *National Central University, Taiwan, R. O. C.*, Chih-Te Chiang; *National Dong Hwa University, Taiwan, R. O. C.*, Jian-Yi. Wang; *National Central University, Taiwan, R. O. C.*, Chun-Lin Chu and Shyong Lee

13:50-14:10

AMFT-7017 (Oral), **Sunil C. Joshi**

Studies on CNT-engineered Ply Interfaces in CFRP Prepreg Composites, *Nanyang Technological University, Singapore*, Sunil C. Joshi, Vishwesh Dikshit

14:10-14:30

AMFT-7009 (Oral), **Puja Goel**

EFFECT OF A AND B-SITE CO-OCCUPANCY ON P-E HYSTERESIS OF Pb0.92 (La1-XBiX)0.08(Zr0.65Ti0.35)0.98O3 (PLBZT) CERAMICS, *National Physical Laboratory, India*, PUJA GOEL

14:30-14:50

AMFT-7036 (Oral), **NOVELLA SUDARMADJI**

Compact Adaptation Device for Selective Laser Sintering of Tissue Engineering Scaffolds, *NTU, Singapore*, N. Sudarmadji, F.E. Wiria, K.F. Leong, C.K. Chua, E.W. Chng, and C.C. Chan

14:50-15:10

AMFT-7023 (Oral), **Mun Wai Lee**

Sealing and bonding of microfluidic polymeric biochips for diagnostic applications, *Singapore Institute of Manufacturing Technology, Singapore*, M.W. LEE, K.P. LIM and J.H. ZHAO

15:10-15:30

AMFT-7032 (Oral), **Songlin Liu**

In-situ plastic-to-metal adhesive bonding via injection moulding, *Singapore Institute of Manufacturing Technology, Singapore*, S. L. Liu, T. T. Ng, K. P. Lim, S. K. Lau

15:30-15:50

AMFT-7038 (Oral), **Jianhong Zhao**

Bonding of polymer micro biochips through laser welding technique, *Singapore Institute of Manufacturing Technology, Singapore*, G. Chen, J. Zhao, S. L. Liu and Y K Juay

16.00-16.20 Tea break

Session: Bonding and Welding Chair: **Dr. Wang Zhenfeng, A*STAR, SIMTech**

16.20-16.50

AMFT-7030 (Invited), **S. Arungalai Vendan**

Magnetically Impelled Arc Butt (MIAB) Welding – Experimentation on steel tubes, Statistical analysis using Design of Experiments., *National Institute of Technology, India*, S. Arungalai Vendan, S. Manoharan, G. Buvanashakaran and C. Nagamani

16:40-17:00

17:00-17:20

Symposium on Biomaterials for the 21st Century

Day 2: 06 Nov. 2008, Thursday

09.00-09.10 Welcome notes from conference chairmen

09.10-09.50 **Plenary Talk, Dr G Sundararajan: Cold Spray Coating Technology: Recent Developments at ARCI**

09.50-10.10 Tea break

12.10-13.00 LUNCH

Oral Session, Room: Lecture Room 1

Chair: Prof Goh Kheng Lim

13:00-13:30

BM-8008 (Invited), **Min Wang**

Nanomaterials and Composite Scaffolds for Tissue Engineering, *The University of Hong Kong, Hong Kong*, Min Wang

13:30-13:50

BM-8016 (Oral), **U. KARACAYLI**

Treatment Impacted Upper Canine with immediate Implant Replacement, *Gulhane Military Academy, TURKEY*, U. KARACAYLI, C. ERTUGRUL KOYMEN, I. MUTLU, R. KOYMEN, Y. GUNAYDIN

14:50-14:10

BM-8021 (Oral), **Jhamak Nourmohammadi**

Nano-scale needle-like apatite formation on the new resin-modified glass-ionomer cement surface by adding bioactive glass, *Material and Energy Research Center, Singapore*, Jhamak Nourmohammadi, S. K. Sadrnezhad, A. Behnam Ghader

14:10-14:30

BM-8007(Oral), **WAN QUAN YONG**

The effect of pH and temperature on the morphology of Hydroxyapatite synthesized using wet chemical precipitation, *NTU, Singapore*, Wan Quan Yong, Yan Li and Chui Ping Ooi

14:30-14:50

BM-8020(Oral), **Wen Shing Leong**

BILAYER SCAFFOLD OF SUPERCRITICAL CO₂ FOAMED POLYCAPROLACTONE ON POROUS CALCIUM PHOSPHATE, *NTU, Singapore*, WENSHING LEONG, SHUCHENG WU, LAYPOH TAN and XIGENG MIAO

14:50-15:10

BM-8003 (Oral), **S. C. SHEN**

Facile Synthesis of Amino-silane Modified Superparamagnetic Silica Nanospheres for Protein Immobilization, *Agency for Science, Technology and Research (A*Star), Singapore*, S.C. SHEN, W. K. NG, A. YUAN, R. B. H. TAN

15:10-15:30

BM-8005 (Oral), **S. C. Joshi**

Thermorheological investigation of hydroxypropyl methylcellulose aqueous solutions in the sol-gel transition, *NTU, Singapore*, Z. Y. Wang, S. C. Joshi, B. Chen

15.30-15.50 Tea break

Chair: Prof. Tan Lay Poh

15.50-16.20

BM-8002 (Invited), **Yabin Zhu**

Fabrication of polymeric tube for esophagus scaffold in esophageal tissue engineering, *Ningbo University, China*, Yabin Zhu, Jianghua Fang, Yuxin Liu

16.20-16.40

BM-8006 (Oral), **S. Punyanitya**

FABRICATION AND CHARACTERIZATION OF POROUS HYDROGEL BASED ON CARBOXYMETHYL CELLULOSE, *Chiang Mai University, Thailand*, S. Punyanitya, A. Raksanti, R. Koonawoot and A. Raksudjarit

16.40-17.00

BM-8004 (Oral), **Mukesh Doble**

EFFECT OF COATING WITH SUBSTITUTED CHALCONES ON BACTERIAL ADHESION ON POLYOLEFINS, *Indian Institute of Technology Madras, India*, L. Lvanya, P. M. Sivakumar, Mukesh Doble

17.00-17.20

BM-8013 (Oral), **Shalini Singh**

Attachment of streptavidin-biotin on 3-aminopropyltriethoxysilane (APTES) modified porous silicon surfaces, *National Physical Laboratory, India*, Shalini Singh, Norman Lapin, P.K. Singh, Mukhtar A. Khan and Yves Chabal

17.20-17.40

BM-8019 (Oral), **Zhong Weixian**

Anti-Bacterial Property of Cold Sprayed Nanocomposite Coating, *NTU, Singapore*, Zhong Weixian, Noppakun Sanpo, Tan Meng Lu, Philip Cheang, Ooi Chui Ping and K.A. Khor

17.40-18:00

BM-8014 (Oral), **Yan Qi Goh**

EFFECT OF AQUEOUS PHASE IN W1/O/W2 DOUBLE EMULSION TECHNIQUE ON POLY(LACTIC-CO-GLYCOLIC ACID) MICROSPHERES, *NTU, Singapore*, Yan Qi Goh and Chui Ping Ooi

19:00 -21:00 **Banquet**

Day 3: 07 Nov. 2008, Friday

12.10-13.00 LUNCH and Poster Session

Symposium on Materials in Devices and Systems (MIDAS)

Day 2: 06 Nov. 2008, Thursday

09.00-09.10 Welcome notes from conference chairmen

09.10-09.50 **Plenary Talk, Dr G Sundararajan: Cold Spray Coating Technology: Recent Developments at ARCI**

09.50-10.10 Tea break

Oral Session, Chairmen: Prof. Chen Zhong

Room: Lecture Room 1

10.10-10.40

MIDAS-9021 (Invited), **Raju V. Ramanujan**

GIANT ENERGY PRODUCT MAGNETIC NANOMATERIALS, *NTU, Singapore*, R.V. Ramanujan, S. Bhamé, S. Viswanathan, P.K. Deheri, S. Shukla, Y. Liu, J.Y. Law and Z.W. Liu

10.40-11.00

MIDAS-9011 (Oral), **T N Narayanan**

OPTICAL POWER LIMITING IN COBALT NANOTUBES AND CARBON NANOTUBES, *Cochin University of Science and Technology, India*, Narayanan T N, Suchand Sandeep C S, Shaijumon M M, Ajayan P M, Reji Philip and M R Anantharaman

11.00-11.20

MIDAS-9009 (Oral), **Manoj Kumar**

INFLUENCE OF PB DOPING ON MULTIFERROIC PROPERTIES OF BIFE03 CERAMICS PREPARED BY RAPID LIQUID PHASE SINTERING PROCESS, *Institute of Technology & Management, India*, MANOJ KUMAR AND K. L. YADAV

11.20-11:40

MIDAS-9016 (Oral), **Suren Samarasinghe**

Fabrication of conducting tracks using a low concentration gold solution by electrohydrodynamic jet printing, *University College London, UK*, S.R. Samarasinghe and M.J. Edirisinghe, M.J. Reece

12.10-13.00 LUNCH

19:00 -21:00 **Banquet**

Day 3: 07 Nov. 2008, Friday

Oral Session, Chair: Prof. R V Ramanujan

Room: Lecture Room 1

08:30-09:00

MIDAS-9006 (Invited), **M. Ignat**

Micro-Tensile Tests on Metal on Polymer and self standing specimens, *Université Joseph Fourier, France*, C. Segueineau, M. Ignat, C. Malhaire,

09:00-09:30

MIDAS-9017 (Invited), **Zhong Chen**

Intrinsic stresses in pulse electro-plated Ni-W films: effect of plating parameters and surface treatment, *NTU, Singapore*, Z. CHEN

09:30-09:50

MIDAS-9018 (Oral), **C. S. Ramesh**

Prediction of Friction and Wear Behavior of Al6061-SiCp (Ni-P coated), *PES Institute of Technology, India*, C.S. Ramesh, Channabasappa.B.H, Abrar Ahamed, Keshavamurthy.R

09:50-10:10

MIDAS-9020 (Oral), **Dinesh Thakur**

Performance analysis of superalloy Inconel 718 while high speed turning, *IIT-Madras, India*, Dinesh Thakur, Dr. B. Ramamoorthy, Dr. L. Vijayaraghavan

10:10-10:30

MIDAS-9015 (Oral), **Qinglin Liu**

CATHODE-SUPPORTED SOFC DIRECTLY OPERATING ON ETHANOL FUEL, *NTU, Singapore*, Q.L. LIU, S.H. CHAN, K.A. KHOR

10.40-11.00 Tea Break

Chair: Prof RV Ramanujan

11.00-11.30

MIDAS-9005 (Invited), **SREEKANTH PURUSHOTHAM**

THERMOSENSITIVE Polymer-Magnetic Nanoparticles for MULTI-Modal Cancer Therapy, *NTU, Singapore*, S. PURUSHOTHAM, Chang PEJ, Rumpel H, Kee IHC, Ng RTH, Chow PKH, Tan CK, R. V. RAMANUJAN

11:30-12:00

MIDAS-9007 (Invited), **QUANG VINH NGUYEN**

Magnet-Polymer composite material for intelligent shape changing structures, *NTU, Singapore*, V. Q. NGUYEN and R. V. RAMANUJAN

12:00-12:20

MIDAS-9013 (Oral), **K. Palaksha**

CONDUCTING POLYMERS AND ITS COMPOSITES, *Malnad College of Engineering, India*, K. Palaksha and Siddaramaiah

12.10-13.00 LUNCH and Poster Session

Chair: Prof Dong Zhili

13:00-13:30

MIDAS-9019 (Invited), **Zhili Dong**

Rietveld refinement and high-resolution transmission electron microscopy of synthetic apatites for advanced applications, *NTU, Singapore*, Zhi-Li Dong

13:30-14:00

MIDAS-9022 (Invited), **JANG-SIK LEE**

Nonvolatile memory devices based on the controlled metallic nanoparticles as the charge storage element, *Kookmin University, Korea*, JANG-SIK LEE

14:00-14:20

MIDAS-9008 (Oral), **Weera Pengchan**

The Leakage Current of Doping Silicon effects on the Generation Lifetime Profile, *King Mongkut's Institute of Technology Ladkrabang, Thailand*, W. Pengchan and T. Phetchakul A. Poyai

14:20-14:40

MIDAS-9001 (Oral), **I. Srithanachai**

Effect of sintering treatment of indium tin oxide thin films prepared by r.f. sputtering, *King Mongkut's Institute of Technology Ladkrabang, Thailand*, I. Srithanachai, S. Niemcharoen, S. Ueamanapong, K. Nutaman; *Thai Microelectronics Center (TMEC), Thailand*, A. Pankiew

14:40-15:10

MIDAS-9003 (Invited), **K. H. Lee**

Fabrication of Nanotip Array Template by Anodization of Aluminum Oxide, *NTU, Singapore*, K. H. Lee, K. W. Wai, C.C. Wong, F. ROMANATO

15:10-15:40

MIDAS-9004 (Invited), **Kwan Wee Tan**

Effect of Electrostatic Interactions on Crystallization of Oppositely Charged Binary Colloidal Films, *Singapore*, KWAN WEE TAN, GUANG LI, YAW KOON KOH, QINGFENG YAN and CHEE CHEONG WONG

15:40-16:00

MIDAS-9002 (Oral), **H. K. Kang**

Active sol gel thin film on Plasmonic Crystal, *NTU, Singapore*, H.K. Kang, C.C. Wong, A. Pistore, G. Brusatin, M. Guglielmi, F. Romanato

16.00-16.20 Tea break

Poster Session: 07th November, 2008, 12:10-13:00 PM

Poster for Biomaterials for the 21st Century Symposium

BM-8009, **Min Wang**

Surface Modification of Three-Dimensional Ca-P/PHBV Nanocomposite Scaffolds with Gelatin, *The University of Hong Kong, Hong Kong, Bin Duan, Min Wang*

BM-8010, **Min Wang**

Apatite/TiO₂ Composite Coatings Formed on Ti, Ti-6Al-4V and NiTi Shape Memory Alloy, *The University of Hong Kong, Hong Kong, Tao Sun, Min Wang*

BM-8011, **Min Wang**

Formation of Hybrid Fibrous Membranes through Electrospinning, *The University of Hong Kong, Hong Kong, Jia-Chen Kang, Min Wang, Xiao-Yan Yuan*

BM-8015, **U. KARACAYLI**

Immediate Implant Replacement With Bone Augmentation After Enucleation Of Radicular Cysts, *Gulhane Military Academy, TURKEY, U. KARACAYLI, C. ERTUGRUL KOYMEN, M. KELES, Y. GUNAYDIN*

BM-8017, **TAE-IL KIM**

HYDROXYAPATITE-COATED NANOFIBER PROPERTY ON PERIODONTAL LIGAMENT FIBROBLAST, *Dankook University, South Korea, HAE-WON KIM; Inha University, South Korea, JUN-HYEOG JANG; Seoul National University, South Korea, TAE-IL KIM and JUNG-WOOK KIM*

BM-8018, **Jun-Hyeog Jang**

Biomimetic surface modification of biomaterials using protein engineering, *Inha Univ., S. Korea, Wonmo. Kang, Eunyi. Jeon; Seoul National University, South Korea, Tae-Il Kim; Inha Univ., S. Korea, Jun-Hyeog. Jang*

BM-8022, **Sierin Lim**

Self Assembly Modulation of a Protein Molecular Carrier, *University of California, USA and NTU, Singapore, Sierin Lim, Cesar Ruiz, Mercè Dalmau, and Szu-Wen Wang*

Poster for Advanced Moulding and Forming Technologies Symposium

AMFT-7005, **Toshiyuki Hamada**

Etching of Silicon Nitride Using Atmospheric Pressure Surface Discharge Plasma, *University of Miyazaki, Japan, T. HAMADA, M. OTSUBO and T. SAKODA*