



MRSI Newsletter

*A quarterly publication of the Materials Research Society of India
for circulation amongst its members*

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April 2007

From the Editors' Desk



The eighteenth Annual General Meeting of MRSI organized by the New Delhi Chapter during February 12-17, 2007 was significant in terms of bringing together a galaxy of experts to deliver lectures on a topic of national importance related to energy. The lectures highlighted the need to achieve energy independence in the country at the earliest through various programmes. Also, it is gratifying to note the excellent quality of the posters presented in this AGM. The organizers of the AGM deserve our praise for the excellent organization and hospitality.

The Thiruvananthapuram Chapter has been given the responsibility of holding the 19th AGM next year. Members will be informed about the details through this newsletter in due course.



H L Bhat
R V Krishnan
T G Ramesh
Editors

For more details about the activities of MRSI, members are advised to visit the society's website at

www.igcar.ernet.in/mrsi

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The MRSI Newsletter is a quarterly update published by the Materials Research Society of India. Members are requested to contribute information of interest to Materials Science community. Members can inform through the Newsletter, recognitions/awards received by them, changes in address, forthcoming events, and any interesting scientific/technological developments in the area of materials. The relevant information should be sent to the following address:

Editors

MRSI Newsletter

Materials Research Society of India
IISc Campus, Bangalore 560 012, India

E-mail: svsm_rsi@physics.iisc.ernet.in
h.lbhat@physics.iisc.ernet.in
krishnan@csscm.acs.ernet.in
tgramesh@csscm.acs.ernet.in

Awards & Distinctions Conferred on Members



We are happy to report that the following members of Materials Research Society of India have received awards and distinctions shown against their names. MRSI congratulates them.

C N R Rao	Desikottama Award, Vishwa Bharathi University (2007)
V S Arunachalam	Honorary Doctorate, VTU (2007)
R P Singh	First Manjunath Shanmugam Integrity Award 2007
Baldev Raj	1. Padma Shri, Govt. of India (2007) 2. Bharat Ratna C Subramaniam Endowment Lecture, University of Madras (2007)
Ashutosh Sharma	1. Distinguished Alumnus Award, Indian Institute of Technology, Kanpur (2007) 2. Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation (2006) 3. Distinguished Speaker Award of the Indian Institute of Chemical Engineers (2006)

P.S: Members are requested to communicate to the Editorial office about the Awards, Honours and Distinctions they have received from various agencies.

STUDENTS' PROJECTS

MRSI will partially support upto 10 projects of students (B.Tech, M.Sc, M.Tech, ME, Ph.D) in the area of Materials Science and Technology under the supervision of a MRSI member. Proposals are invited before September 30th 2007.

Prof R . W. Cahn- In Memoriam

The Materials Research Society of India regrets to announce the death of Robert Wolfgang Cahn, one of its most distinguished Honorary Members, on April 9, 2007. Cahn was born in 1924. He obtained his B.S. Metallurgy, 1945; Ph.D. Physics 1950; Sc.D. Metallurgy 1963 all from the University of Cambridge. He made seminal contributions to our understanding of ordering, diffusion, recovery, rapid solidification and twinning in metals and intermetallics. He was one of the first to give evidence for the existence of dislocations by his elegant work on polygonization. In addition, he has been a prolific editor. He is the founding editor of several journals: Materials Science, Nuclear Materials and Intermetallics. As the editor of a series of book-series, he helped define the subject of Materials Science. His history of Materials Science is a vivid narrative entitled 'The Coming of Materials Science'. His numerous essays in Nature have enchanted the materials community. Robert Cahn received many honours including the Acta Materialia Gold Medal in 2002. He was elected a Fellow of six academies including the Royal Society and the Chinese Academy of Sciences. Professor Cahn adopted India and encouraged a large number of Indian scientists. In turn, the Indian materials community embraced him by electing him as Honorary Member of the Materials Research Society of India, the Indian Institute of Metals and the Indian National Science Academy and by organizing a symposium in Bangalore in 1995 to mark his 70th birthday. Even as MRSI mourns the passing away of Robert Cahn, it celebrates his life full of accomplishments and records with gratitude his significant contributions to the flowering of materials research in India.

Prof. S Ranganathan

REPORT ON THE 18th AGM OF MRSI

The 18th Annual General Meeting (AGM) of the Materials Research Society of India (MRSI) was organized by the Delhi Chapter of MRSI and the National Physical Laboratory, New Delhi and was held at National Physical Laboratory, New Delhi during 12-14 February 2007. The theme of the AGM symposium was "Materials for Energy Generation, Conservation and Storage". The detailed programme of the AGM was circulated to all the participants.

As a part of this AGM, the APAM India Chapter meeting was held on 11.02.2007 at the DRDO Bhawan. This meeting was presided over by Prof. P. Ramachandra Rao, President, APAM India Chapter, and the speakers included Dr. R.P. Singh of Power Grid Corporation of India, Gurgaon and Dr. R.K. Malhotra of Indian Oil Corporation, Faridabad. Prof. O.N. Srivastava, Secretary APAM India Chapter, briefed the members about the APAM activities and also gave the concluding remarks. This was followed by the MRSI Council meeting, which was presided by Dr. R.A. Mashelkar.

In the evening of 11th February, 2007 there was a Public Lecture entitled "Nuclear Energy: An Emerging Primary Energy Source" by Dr. Anil Kakodkar, Secretary, Department of Atomic Energy. In his brilliant lecture, Dr. Kakodkar covered the various options for making full use of our uranium and thorium resources and provided an overview of the various nuclear energy production and nuclear energy assisted systems that are being developed in the country.

The three day MRSI AGM (12th-14th February, 2007) was attended by more than 450 delegates from different institutes and universities all over India. The AGM was inaugurated Prof. P. Rama Rao, ISRO Brahm Prakash Distinguished Professor. The Inaugural address by Prof. Rama Rao was followed by the Distinguished Materials Scientist of the Year Lecture by Dr. V.K. Aatre, former Scientific Advisor to Raksha Mantri. Dr. Aatre traced the various materials related programmes of importance in which he was closely associated during his distinguished career in the country. In particular, he highlighted the impact of the National Programme on Smart Materials in the national scenario particularly in terms of establishing certain key facilities which has triggered research on materials and devices.

The AGM, spread over 3-days, consisted of 8 technical sessions and included 12 Medal Lectures, 12 Theme Lectures, 3 Invited Lectures, 2 MRSI-ICSC Superconductivity and Materials Science Annual Prize Lectures and MRSI Distinguished Lecturership Lecture. These awards were presented to the recipients by Prof. P. Ramachandra Rao, VC, DIAT. In this AGM about 266 poster papers were accepted for presentation, from different institutions all over the country. There were 3 lectures from candidates shortlisted for the GC Jain Memorial Prize for the best thesis in materials science and technology. The conference ended with a concluding session, which included the presentation of 6 Best Poster prizes and G.C. Jain Memorial Prize. These prizes were awarded to the following:

G.C. Jain Memorial Prize : Dr. Mainak Roy, BARC, Mumbai

Best Poster Prizes :

- (i) "Patterned silicon wafer for nanostructure growth" S K Panda and C Jacob, Materials Science Centre, Indian Institute of Technology, Kharagpur.
- (ii) "Characterization of structural and magnetic transitions in Ni-Mn-Ga Heusler type alloys" Ranjan Kumar Singh, R Gopalan, R P Mathur, P Ghosal, V Chandrasekaran, Defence Metallurgical Research Laboratory, Hyderabad and M Shamsudin, Department of Metallurgical Engineering, Banaras Hindu University, Varanasi.
- (iii) "Controllable tungsten oxide thin film nanostructures as cathodes for electrochromic smart windows" M Deepa, Govind, S M Shivaprasad, Shahzada Ahmad and A K Srivastava, National Physical Laboratory, Dr. K S Krishnan Road, New Delhi.
- (iv) "Ultra high purification of gallium through multi-step processing for opto-electronic device applications" U Rambabu, N R. Munirathnam and T L Prakash, Centre for Materials for Electronics Technology, Hyderabad.

- (v) "Preparation and characterization of β -PVDF films" Anjana Jain, Kalyan Sundaram, V Vedha Prakash, National Aerospace Laboratories, Bangalore and H.H. Kumar, ARDE, Pashan, Pune
- (vi) "Effect of Mn" acetylacetonate complexes on the hydrophilicity of nanocrystalline sol-gel derived TiO₂ films by dip-coating technique" Ravi Ranjan Pandey, C P Sharma, K K Saini, Vinod Tanwar, Chandra Kant, Davinder Singh, Balbir Singh, National Physical Laboratory, Dr. K S Krishnan Road, New Delhi and Man Singh, Department of Chemistry, Chemistry Research Lab, Deshbandhu College, University of Delhi, New Delhi.

Dr. Anil K Gupta
Convenor, 18th AGM of MRSI



IUMRS-ICAM 2007

10th International Conference on Advanced Materials
8-13, October, 2007, Bangalore, India
Venue: HOTEL GRAND ASHOK



As you are aware MRSI will be organizing the IUMRS-ICAM 2007 in Bangalore, India during October 8-13, 2007. The programme will consist of (i) Plenary Lectures (ii) Invited Lectures (iii) Oral Presentations (iv) Poster Presentations and (v) Public Lectures. It will be a six day conference with more than ten parallel sessions. We are giving below the list of theme symposia to be held at this conference along with the contact details of the theme symposia chairs. For further details refer to website www.icam2007.com

Theme symposia	Chair / Co-chairs
(A) Intelligent Materials	AR Upadhyya, NAL, Bangalore, Email: director@css.cmmacs.ernet.in / S Mohan, TG Ramesh, AP Malshe, C Boller, H. Asanuma, J Narayana Das
(B) MEMS	Rudra Pratap, IISc, Bangalore, Email: pratap@mecheng.iisc.ernet.in / KN Bhat, B Darling, K Natarajan, P Ryser,
(C) Functional Materials	Dhananjai Pandey, BHU, Varanasi, Email: dpandey@bhu.ac.in /R Friend, H Ishiwara, D Kumar, KBR Varma, U Waghmare
(D) Self Assembly & Nanomaterials	S Bhattacharya, IISc, Bangalore, Email: sb@orgchem.iisc.ernet.in / GU Kulkarni, P Ayyub
(E) Magnetic & Spintronics Materials	KVS Rama Rao, IIT-Madras, Chennai , Email: kvs@iitm.ac.in /PS Anil Kumar, G Markandeyulu, VG Harris, I Felner
(F) Semiconductors for Opto-electronics	V Kumar, NPL, New Delhi, Email: vkmr@mail.nplindia.ernet.in /B Dev, BM Arora, H Hasegawa, P Dutta, S Ashok
(G) Materials for Biomedical Applications	M Jayabalan, SCTIMST, Thiruvananthapuram, Email: jayabalan@sctimst.ac.in / muthujayabalan@rediffmail.com/ BR Ratner, E Piskin, PR Apte, GV Shivashankar, Y Tabata
(H) Soft Condensed Matter	A K Sood, IISc, Bangalore, Email: asood@physics.iisc.ernet.in /DA Weitz, A Yodh, J Raedler, M Rao
(I) Polymer Materials	A Misra, IIT-Bombay, Mumbai, Email: amisra@iitb.ac.in /S Ramakrishnan, R Menon, S Sivaram, P Lemstra, M Tirrell, A Windle
(J) Sensor Materials	Kamal Singh, Amaravati University, Amaravati, Email: kamalsingh48@indiatimes.com /PS Devi, AR Raju, HL Tuller, E Traversa, J Maier, P Gouma, BG Muller

(K) Photonic Materials/Active Organic Materials	K S Narayan, JNCASR, Bangalore, Email: narayan@jncasr.ac.in / J Zyss, VPN Nampoori
(L) Multilayered Materials	MK Sanyal, SINP, Kolkata, Email: milan@lotus.saha.ernet.in / SD Bader, Y Iye, H Dosch, RK Budhani, JK Basu
(M) Hybrid Materials	R Murugavel, IIT-Bombay, Mumbai, Email: rmv@iitb.ac.in / JV Yakhmi, BARC, Mumbai, Email: yakhmi@magnum.barc.ernet.in / PK Bharadwaj, J Gopalakrishnan, C Sanchez, TD Tilley, MJ Rosseinsky, M Fujita
(N) Energy Materials	KT Jacob, IISc, Bangalore, Email: katob@met.iisc.ernet.in / AK Shukla, AK Barua, ON Srivastava, SC Singhal, J Mizusaki, M Gratzel, J Nozik, GJ Meyer
(O) Composite Materials	MK Surappa, IISc, Bangalore, Email: mirle@met.iisc.ernet.in / YR Mahajan, MK Sridhar, E Lavernia, A Mortensen
(P) High Performance Structural Materials	Baldev Raj, IGCAR, Kalpakkam, Email: dir@igcar.gov.in / S Banerjee, D Banerjee, RL Klueh, G Sundararajan, G Malakondaiah, A Alamo, LM Manocha, S Karthikeyan
(Q) Computational Materials Science	GP Das, IACS, Kolkata, Email: msgpd@mahendra.iacs.res.in / G Ananthakrishna, S Balasubramanian, P Bloechl, S Datta, L Kubin, V Kumar, S Narasimhan
(R) Materials for Catalysis	B Viswanathan, IIT-Madras, Chennai, Email: bvnathan@iitm.ac.in / Rajiv Kumar, S Natarajan, S Narayanan, PA Wright, P Selvam
(S) Characterization of Materials	P Chaddah, CSR, Indore, Email: chaddah@csr.ernet.in / A K Raychaudhuri, G Solórzano, I Samajdar, L Cohen, S Das, V S Raghunathan, V K Pecharsky
(T) Microscopy of Materials	K Chattopadhyay, IISc, Bangalore, Email: kamanio@met.iisc.ernet.in / G K Dey, K Muraleedharan
(U) Materials Synthesis-Novel Approaches	K Byrappa, Univ.of Mysore, Mysore, Email: byrappak@yahoo.com / M Yoshimura, RE Riman, N Setter
(V) Nanomaterials and Devices	LM Kukreja, Raja Raja Ramanna Centre for Advanced Technology, P.O CAT, Indore 452 013, India, Email: kukreja@cat.ernet.in / N Bhat, V Venkataraman, P Ziemann, R Katiyar
(W) Materials Education	P Ramachandra Rao, ARC-I, Hyderabad, Email: pramachandra_rao@yahoo.com / P Rama Rao, S Suresh

New Members

Enrolled between January 1 and March 31, 2007

Life Members

Yusuf S M (LM B917)
Solid State Physics Division
Bhabha Atomic Research Centre
Trombay
Mumbai 400 085
Tel: 022-25595383
Fax: 022-25505151
Email: smyusut@barc.gov.in

Babita Tiwari (LM B918)
GCTS, TPPED
Bhabha Atomic Research Centre
Trombay
Mumbai 400 085
Tel: 022-25595660
Email: babitat@barc.gov.in

Vanitha C (LM B919)
107, Anna Nagar
Valappady 636 115
Tel: 9994970405
Email: vanit_2001@yahoo.co.in

Annie John (LM B920)
Biomedical Technology Wing
Sree Chitra Tirunal Institute for
Medical Sciences & Technology
Poojapura
Thiruvananthapuram 695 012
Tel: 0471-2520215, Fax: 0471-2341814
Email: ajkari@sctimst.ac.in

Kalyana Krishnan V (LM B923)
Biomedical Technology Wing
Sree Chitra Tirunal Institute for Medical
Sciences & Technology, Poojapura
Thiruvananthapuram 695 012
Tel: 0471-2520221, Fax: 0471-2341814
Email: kalyank@sctimst.ac.in

Shubhabrata Datta (LM B926)
School of Materials Science and
Engineering, Bengal Engineering and
Science University, Shibpur
Howrah 711 103
Tel: 033-26688140
Fax: 033-26682916
Email: sdatta@matsc.becs.ac.in

Navneet Gupta (LM B929)
Physics Group, Birla Institute of
Technology and Science, Pilani-Goa
Campus, Zuarinagar,
Goa 403 726
Tel: 0832-2580245, Fax: 0832-2557033
Email: dr.guptanavneet@gmail.com

Anami Bhargava (LM B932)
4-D-140, Ekta Path, JNV Nagar
Bikaner 334 003
Tel: 0151-2528036, Fax: 0151-2528047
Email: anami_b@rediffmail.com

Ishvar Jadhav Patil (LM B935)
Plot No. 4, Kashimanagar
Near Patel STD, Shahada District
Nandurbar 425 409
Tel: 02565-223576, Fax: 02565-223576

Prabhakar Singh (LM B938)
School of Sciences, New Academic
Block-D, Indira Gandhi National Open
University, Maidan Garhi
New Delhi 110 068
Tel: 011-29532167, Fax: 011-29532167
Email: psingh_upc@yahoo.com

Subodh G (LM B921)
Fire Ceramics, room No. 417
Regional Research Laboratory
Thiruvananthapuram 695 019
Tel: 0471-2515246
Fax: 0471-2491712
Email: gsubodh@gmail.com

Dhamendra Pal (LM B924)
426, Meerapur Cantonment
(Near Panik Tanki)
Kanpur 208 004
Tel (Res): 0512-2327565
Email: dpal_ra@yahoo.co.in
dpal_ra@rediffmail.com

Mallar Ray (LM B927)
School of Materials Science and
Engineering, Bengal Engineering and
Science University, Shibpur
Howrah 711 103
Tel: 033-26688140, Fax: 033-26682916
Email: mray@matsc.becs.ac.in

Gopalakrishna Parthasarathy
(LM B930)
National Geophysical Research Institute
Hyderabad 500 007
Tel: 040-23434617
Email: gpsarathy@ngri.res.in

Sujeet Chaudhary (LM B933)
Department of Physics
Indian Institute of Technology-Delhi
Hauz Khas
New Delhi 110 016

Arun Singh (LM B936)
E-6, Delhi University Teachers Flats
Mukherjee Nagar
Delhi 110 009
Tel: 011-27667725 Ext. 1354
Fax: 011-27667061
Email: drarunsingh07@gmail.com

Amalan J Pal (LM B939)
Department of Solid State Physics
Indian Association for the Cultivation of
Science, Jadavpur
Kolkata 700 032
Tel: 033-24734971
Email: sspajp@iacs.res.in

Ramesh Babu N (LM B922)
Department of Metallurgical & Materials
Engineering
National Institute of Technology
Tiruchirapalli 620 015
Tel: 09840228891, Fax: 0431-2500133
Email: nrb@nitt.edu

Venkatesh Rengaswamy (LM B925)
Flat No. 55, HCL towers
B9/16, Sector 62
Noida 201 307
Email: genel74@yahoo.com

Gursharan Kaur Padam (LM B928)
Electronic Materials Division
National Physical Laboratory
Dr. K S Krishnan Marg
New Delhi 110 012
Tel: 011-25742611 Ext. 2459
Fax: 011-25726938
Email: gkpadam@mail.nplindia.ernet.in

Sanhita Majumdar (LM B931)
B-27/1, Kalindi Housing Estate
Kolkata 700 089
Tel (Res): 033-2522-2013
Email: mailid-sm@yahoo.com

Rajendra Shankarrao Patil (LM B934)
Plot No. 21, Ganeshnagar
Shahada District,
Nandurbar 425 409
Tel: 02565-223576, Fax: 02565-223576
Email: rspatil_shahada@yahoo.co.in

Asim Tewari (LM B937)
Materials Characterization & Modeling
Group, General Motors India Pvt Ltd,
Units 1-8, 3rd Floor, Creator Building,
International Technology Park,
Whitefield Road,
Bangalore 560 066
Tel: 080-40414767, Fax: 080-41158562/64
Email: asim.tewari@gm.com

Narendra Nath Ghosh (LM B940)
Chemistry Group, BITS Pilani
Goa Campus, Zuarinagar
Goa 403 726
Tel: 0832-2580318
Email: naren70@yahoo.com

Annual Members

Nagaraja Hosakoppa (AM B201)
Dept. of Physics
National Institute of Technology
Suratkal 575 025
Tel : 0824-2474000 Ext. 3052
Fax : 0824-2474033
Email : hosakoppa@yahoo.com

Intikhab A Ansari (AM B202)
Room No. 317, SRK Hostel (old)
Jamia Millia Islamia
(Central University)
New Delhi 110 025
Tel (Res) : 9811634008

CALENDAR OF EVENTS (APRIL 2007-FEB 2008)

<p>April 9-11, 2007, National Conference on Recent Trends in Optoelectronics and Laser Technology (NCOL 2007), Dr. P V Mahadevan Pillai, Convenor. NCOL 2007, Department of Optoelectronics, University of Kerala, Kariavattom Campus, Thiruvananthapuram 695 581, Tel: 0471-2412167, Email: convenor.ncol2007@gmail.com</p>
<p>June 20-22, 2007, TMS 2007, Electronic Materials Conference and Exhibition, Edward T Yu, General Chair, University of California, ECE Department MC 0407, 9500 Gilman Drive, La Jolla, CA 92093, Tel: (858) 534-6619, Fax: (858) 822-3425, Email: ety@ece.ucsd.edu</p>
<p>July 1-6, 2007, International Conference on Materials for Advanced Technologies (ICMAT 2007), ICMAT Secretariat, Materials Research Society of Singapore, c/o Institute of Materials Research & Engineering, 3, Research Link, Singapore 117 602, Tel: (65) 6874 1975, (65) 6778 1036, Fax: (65) 6777 2393, Email: icmat@mrs.org.sg</p>
<p>July 4-6, 2007, International Symposium on Advances in Materials Engineering, Prof. K Chattopadhyay, Department of Materials Engineering, Indian Institute of Science, Bangalore 560 012, Tel: 080-22932682, Fax: 080-23600472, Email: diamond@materials.iisc.ernet.in, Website: http://materials.iisc.ernet.in/~diamond/</p>
<p>September 3-5, 2007, The Third Asian Particle Technology Symposium (APT 2007), APT 2007 Secretariat, Department of Chemical Engineering, Tsinghua University, Beijing 100084, China, Email: apt2007@flotu.org, Website: http://www.flotu.org/apt2007</p>
<p>October 8-13, 2007, International Conference on Advanced Materials (ICAM 2007), Prof. S B Krupanidhi, Conference Chair, IUMRS-ICAM Secretariat, Materials Research Society of India, Indian Institute of Science, Bangalore 560 012, Tel: 080-22932882, 65334302, Fax: 080-23602028, Email: secretariat@icam2007.com, Website: www.icam2007.com</p>
<p>December 12-14, 2007, International and INCCOM-6 Conference on Future Trends in Composite Materials and Processing, Organizing Secretary, Kamal K Kar, Dept. of Mechanical Engineering, and Materials Science Programme, Joint Secretary, J Ramkumar, International and INCOMM-6 Conference, 2007, Indian Institute of Technology-Kanpur, Kanpur 208 016, Tel: 0512-2597687, Fax: 0512-597459, 597408, Email: incomm6@iitk.ac.in</p>
<p>January 7-8, 2008, National Conference on Advanced Materials for Aerospace and Defence Applications, Prof. R Subba Rao, Amrita Vishwa Vidyapeetham, Ettimadai, Coimbatore, Website: www.amrita.edu/amada</p>
<p>February 17-21, 2008, 'POLYCHAR' 16, World Forum on Advanced Materials preceded by one day workshop on polymer characterization and one day preconference mini symposium on greener routes to polymer synthesis, Dr. Poonam Tandon, Executive Secretary-cum-Treasurer, POLYCHAR 16, Physics Department, University of Lucknow, Lucknow-226 007, Tel : 0091-522-2740840, Fax : 0091-522-2740840, Email : contact@polychar16.com</p>

Members are requested to give information about the conferences/symposia/workshops they are organizing well in advance so that the same can be inserted in the “calendar of events”.