Proceedings of the 82nd Annual Session of the Indian Ceramic Society

INTRODUCTION
The joint inaugural ceremony of the 82nd Annual Session of the Indian Ceramic Society (InCerS), 70th Annual Session of the All India Pottery Manufacturers’ Association (AIPMA) and 44th Annual Session of the Indian Institute of Ceramics (IIC) was held on 9th January, 2019 at “The Wave International”, Jamshedpur, popularly known as Steel City of India. The Annual Session of the Indian Ceramic Society was organized by the Jamshedpur Chapter of the Indian Ceramic Society jointly with Tata Steel during 9th-10th January, 2019 and the title of the Conference was ‘National Symposium on Ceramics’.

INAUGURAL PROGRAMME
The inaugural programme started with traditional lighting of ceremonial lamp and Sanskrit Stotra. The inaugural session was chaired by the Chief Guest, Dr Debashish Bhattacharjee (Vice President, Technology and New Materials Business, Tata Steel). Guests-of-Honour were Dr Indranil Chattoraj (Director, NML) and Mr Hakimuddin Ali (Chairman, Imerys India and South East Asia). Dr K. Muraleedharan (Director, CSIR-CGCRI and Vice President, InCerS), Dr Barundeb Mukherjee (President, IIC), Mr B. S. Ganguli (Immediate past President, AIPMA), Mr Brijender Singh (Chairman, Organizing Committee and Jamshedpur Chapter, InCerS) and Mr Dhiman Banerjee (Secretary, Organizing Committee and Jamshedpur Chapter, InCerS) also shared the dais during the inaugural function.

After lightning of the lamp, Mr Brijender Singh, Chairman, Organizing Committee and Jamshedpur Chapter, InCerS; Mr B. S. Ganguli, Immediate past President, AIPMA; Dr Barundeb Mukherjee, President, IIC; Mr Hakimuddin Ali, Chairman, Imerys India and South East Asia; Dr Debashish Bhattacharjee, Chief Guest; Dr Indranil Chattoraj, Director, NML; Dr K. Muraleedharan, Vice President, InCerS and guests actively participated in the 2-days’ conference.

As is well known, the Annual Session of the Society provides an opportunity to the delegates to have the benefit of exposure to the latest developments in ceramics and provides them with a suitable forum for sharing their ideas and experiences. It also provides the delegates with a platform to delve deeply into the problems and for exchanging views and prospects of the Indian ceramic industry as a whole.

About 250 delegates from all over India and abroad comprising scientists, technologists, students, equipment manufacturers, raw material suppliers and end-users in the field of glass and ceramics, refractories and allied disciplines, academic institutions, R&D organizations as well as guests and invited speakers actively participated in the 2-days’ conference.

The conference received support from Platinum sponsors: RHI Magnesita, Vesuvius India Ltd & TRL Krosaki Refractories Ltd; Gold sponsors: Refratechnik & Almatis Alumina Pvt Ltd; Silver sponsors: Dalmia-OCL, Minteq, Calderys, Orient Abrasives Ltd, Puyang Refractories Group Co. Ltd, IFGL & GSB India.

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Research at CSIR-NML and highlighted on synthetic bioceramics using bio-compatible molecules. He stated that NML, the third in the CSIR family, had evolved into a premier Indian organization in the stated areas and had the largest creep testing facility in India and one of the largest in Asia. He welcomed all the industry personnel for industry-collaboration with CSIR-NML.

Mr Hakimuddin Ali, Chairman, Imerys India and South East Asia, and the Guest-of-Honour of this event, while welcoming the delegates expressed his hope that the conference would be fabulously successful. In his speech, he mainly gave a concise focus on the activities of Imerys India, the world leader in mineral-based specialties for industry. He stated that Imerys delivers high value-added, functional solutions to a great number of industries, ranging from process manufacturing to consumer goods. In this connection he discussed about the demand drivers, cost drivers and challenges of the ceramic industry and mentioned about the increasing demand of higher quality materials for rapidly growing Indian ceramic industry. He expressed his high satisfaction that the Imerys group could cope up with this demand to satisfy its customers in every aspect.

Honorable Chief Guest, Dr Debashish Bhattacharjee (Vice President, Technology and New Materials Business, Tata Steel), while delivering his inaugural address, vigorously thanked the Organizing Committee for inviting him as the Chief Guest to the grand event and also wished the conference a grand success. He delivered a brief lecture on advanced ceramics as well as the marked strategy, knowledge value system, global competitiveness and sustainability. He elaborated the details on development of global research and technology roadmap, step change in efficiency and effectiveness of R&D function, development of new low cost and environment friendly technologies and products, driving improvement in efficiency and performance of new products. At last, he conveyed his sincere thanks to Mr Brijender Singh, Mr Dhiman Banerjee, and their dedicated team, who had left no stone unturned to make the 82nd Annual Session of the Society a grand success.

Dr K. Muraleedharan, Director, CSIR-CGCRI and Vice President, Indian Ceramic Society, while delivering his address, extended hearty welcome to all the dignitaries on the dais, the delegates and the guests to the joyous inaugural ceremony of 82nd Annual Session of the Society and wished the programme a grand success. He apprised that ceramic education started in India at Banaras Hindu University (BHU), Varanasi by the grace of Pandit Madan Mohan Malaviya. He gave a brief note about the activities of CSIR-CGCRI. He illustrated CSIR-CGCRI as the only organization in India pursuing R&D in glass and one among a very few institutes carrying out R&D in various aspects of ceramics and ceramic based composite materials. He stated about the establishment of two extension centres at Naroda (Gujarat) and Khurja (UP) with partial financial assistance from the respective state Governments in order to serve the local industrial clusters. In both the cases the local industries were significantly benefitted in introducing new technologies as well as upgrading the existing technologies. While concluding, he made a special admiration to the warm hospitality and co-operative attitude of the Jamshedpur chapter of the Society which made the Annual Session memorable and unforgettable to all the participants.

Dr Barundeb Mukherjee, President, Indian Institute of Ceramics (IIC), at the outset expressed his hearty welcome to all the dignitaries on the dais, industrialists, the delegates and the participants to the eventful 43rd Annual Session of IIC. In his brief speech, he informed about various activities of the Institute and shared his observations with the audience. He acknowledged with deep appreciation the valuable advice of all the Chairpersons, convener and members of all sub-committees of Indian Institute of Ceramics (IIC) to carry out the objectives of the Institute.

Mr B. S. Ganguli, Immediate past President, All India Pottery Manufactures Association (AIPMA) conveyed his hearty welcome to the Hon’ble Chief Guest, Guest of Honour, distinguished guests, fellow delegates and representatives of business houses to the 70th Annual Session of the Association. He then summarized the activities of AIPMA. He was hopeful that AIPMA would be instrumental to establish coordination between the research institutes such as CGCRI, NML, different regional research laboratories, etc and the
member units of AIPMA to get the benefits of latest technological development.

After the inaugural speeches, dignitaries on the dais were awarded by token of appreciation by the Jamshedpur chapter. The inaugural session was concluded by vote of thanks, proposed by Mr Dhiman Banerjee, Secretary, Jamshedpur Chapter of InCerS. Mr Banerjee specially thanked the Chief Guest, Guests-of-Honour and all the dignitaries present on the dais for their gracious presence. He conveyed his special appreciation to the advertisers, sponsors and co-sponsors who had come forward with their generous contributions to make the event successful. He deeply appreciated the co-operations received from the members of the Organizing committee and other functionaries as also the help and guidance from the head office which paved the way towards success of the Session. He made a particular reference to the co-operative attitude of the delegates, without which the Session could not be held successfully.

FELICITATIONS AND AWARDS

On this occasion, various awards of the Society, namely, D. N. Agrawal Memorial Award, Srikishan Modi Memorial Award, Refractory Technologist Award, Prof. Sasadhar Ray Memorial Award, Dr R. L. Thakur Memorial Award, Malaviya Award, Deokaran Award and Ganpule Award were conferred for excellence in various fields of ceramics. Best Chapter Award for cognizable performance towards upholding the objectives of the Society was also awarded on this occasion. (full details available at p. 63 of this issue in the ‘Report on the Activities of the Society’). Dr Debashish Bhattacharjee and Mr Hakimuddin Ali presented the awards to the awardees during the inaugural programme. Four awards of AIPMA, viz. Madan Gopal Bhagat Award, Gopal Krishna Bhagat Award, Suresh Sen Smriti Puroshkar and Sahaj Memorial Award were presented to Mr B. S. Ganguli (Ganguli Ceramics, Kolkata), Md Imran Shamim (Sunrise Ceramics, Khurja, UP), Mr R. P. Trivikram (Global Pipe Engineering Systems (I) Pvt Ltd, Karnataka) and Mr Veerendra Tyagi (IIT-BHU, Varanasi, UP), respectively by Dr Indranil Chattoraj.

EXHIBITION

The Organizing Committee of the 82nd Annual Session organized an industrial exhibition to exhibit ceramics, glass and allied products with a view to giving an opportunity for showcasing their capabilities/expertise. The exhibition was inaugurated by Mr Shreekant Somany (CMD, Somany Ceramics Ltd, Noida) President, InCerS and Dr K. Muraleedharan (Director, CSIR-CGCRI, Kolkata), Vice President, InCerS. Fourteen (14) different companies, including industry stalwarts, participated in the exhibition. All the delegates showed keen interest in the products and processes exhibited. The exhibition opened a vista of opportunities for the budding industries and investors.

Participating companies of the exhibition were as follows:

1. Almatis Alumina Pvt Ltd
2. Ants Ceramics Pvt Ltd
3. Arcum Group of Companies
4. CSIR-Central Glass & Ceramic Research Institute
5. Lizmontagens India Pvt Ltd
6. Mahakoshal Refractories Pvt Ltd
7. Murugappa Morgan Thermal Ceramics Ltd
8. Nuoming High Temperature Refractory Materials Co. Ltd
9. Purmetall GmbH & Co. KG
10. Saint-Gobain Glass India Ltd
11. Shinagawa Refractories Co. Ltd
12. Sino-Global Sourcing and Supply Ltd
13. Vermont Electric Power Company

ANNUAL GENERAL MEETING

Indian Ceramic Society (InCerS), All India Pottery Manufacturers’ Association (AIPMA) and Indian Institute of Ceramics (IIC) organized their Annual General Meetings during the occasion. The proceedings of the AGM of the Indian Ceramic Society is available at pp.55-57 of this issue.
TECHNICAL SESSION

The Technical Sessions consisted of one Memorial lecture, eight Plenary Lectures, 2 Invited Lectures and 98 Oral Presentations. All the session Chairmen conducted the technical sessions and the speakers presented their papers in a nice manner. A lot of discussions took place during the lunch and tea break.

Memorial Lecture

31st M. G. Bhagat Memorial Lecture

‘31st M. G. Bhagat Memorial Lecture’ was delivered by Prof. Bikramjit Basu, Professor, Materials Research Center, Indian Institute of Science (IISc), Bangalore, Karnataka on January 9, 2019 on the topic, “Ultra High Temperature Ceramics (UHTC) for Hypersonic Space Vehicles: Opportunities and Challenges”.

Plenary Lectures

Delegates had the privilege to listen to the plenary talks by dignitaries like Prof. Indranil Manna (IIT, Kharagpur), Prof. Thomas J. Webster (Northeastern University, Boston), Dr Ranjan Sen (CSIR-CGCRI, Kolkata), Prof. Gabor Mucsi (University of Miskolc, Hungary), Prof. Ashish Garg (IIT, Kanpur), Mr Atanu Saha (GE Global Research, Bangalore), Mr Arindam Mukherjee (Elkem South Asia Pvt Ltd, Mumbai) and Mr T. K. Chakraborty (Saint-Gobain Glass India Ltd, Bhilwadi, Rajasthan). All the eight plenary lectures were presented on 9th January, 2019 and were distributed in two technical sessions, which were Chaired by Prof. H. S. Maiti (Former Director, CSIR-CGCRI, Kolkata) and Dr Suman Kumari Mishra (Senior Principal Scientist, CSIR-NML), respectively.

Invited Lectures

In the second day i.e. on 10th January, 2019, all the Technical sessions were held at ‘Shavak Nanavati Technical Institute (SNTI)’, Bistupur, Jamshedpur. In the morning, two Invited lectures were delivered by (i) Dr P. Sujatha Devi (CSIR-CGCRI, Kolkata) and (ii) Prof. Parag Bhargava (IIT, Mumbai) under the Chairmanship of Dr Ranjan Sen (CSIR-CGCRI, Kolkata).

Oral Presentations

All the oral presentations were held on 10th January, 2019 at ‘Shavak Nanavati Technical Institute (SNTI)’, Bistupur, Jamshedpur. A total of 98 oral presentations were distributed in five parallel sessions before lunch and four parallel sessions after lunch. The themes of the pre-lunch sessions were ‘Electroceramics’ (A1), ‘High Temperature Materials’ (B1), ‘Valorization of Waste’ (C1), ‘Bioceramics’ (D1), and ‘Whitewares’ (E1) and were Chaired by Prof. Ashish Garg (IIT, Kanpur), Prof. Ritwik Sarkar (NIT, Rourkela), Dr Sanjay Kumar (CSIR-NML, Jamshedpur), Dr Suprabha Nayar (CSIR-NML, Jamshedpur) and Dr L. K. Sharma (CSIR-CGCRI, Khurja), respectively. The themes of the post-lunch sessions were ‘Energy Materials’ (A2), ‘Structural Ceramics’ (B2), ‘Geopolymers and Building Materials’ (C2), ‘Coating and Composites’ (D2) and were Chaired by Dr P. Sujatha Devi (CSIR-CGCRI, Kolkata), Dr Lokesh Pathak (CSIR-NML, Jamshedpur), Prof. Gabor Mucsi (University of Miskolc, Hungary) and Dr Suman Kumari Misra (CSIR-NML, Jamshedpur), respectively. Certificates were given to all the paper presenters during the Session.

ENTERTAINMENT

During the entire course of the 82nd Annual Session, the Organizing Committee arranged very good quality delicious breakfast and lunch for all the delegates and guests. The delegates were also invited to join conference dinner on 9th and 10th January, 2019 at ‘The Wave International’ and at the ‘BOC Ground’, respectively, and treated with leisurely sumptuous dinner.

On 9th January, the delegates were entertained by outstanding show of ‘Sand Art’ followed by melodious Ghazal. On the second day, i.e. on 10th January, 2019 at ‘BOC Ground’ the delegates and all invitees were entertained with a beautiful vocal performance. All members enjoyed the dinners and the cultural programmes arranged during the session.