



# संकल्प

## Newsletter

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### CSIR - IIP

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### DR GIRISH SAHNI, DIRECTOR-GENERAL, CSIR AND SECRETARY, DSIR, GOVT. OF INDIA, VISITS CSIR-INDIAN INSTITUTE OF PETROLEUM, DEHRADUN, APRIL 18, 2017

On April 18, 2017 the CSIR-Indian Institute of Petroleum (IIP) was witness to the visit of Dr Girish Sahni, Director-General, Council of Scientific & Industrial Research (CSIR) and Secretary, DSIR, Govt. of India. It is well-known that the CSIR is an autonomous body under the Govt. of India which has around 38 national institutes/laboratories and associated regional outreach centres spread all over the country, engaged in industry-oriented research in different fields of science as diverse as aerospace, petroleum, leather, chemical sciences, physics, biology, etc. Dr Girish Sahni, who heads all these laboratories/institutes as the Director-General, addressed the scientists, technical officers and others in the auditorium of the Institute and said that the CSIR-IIP enjoys a special spot amongst the CSIR laboratories. He called upon all to work like soldiers and break intellectual boundaries.



*Dr Girish Sahni addressing the CSIR-IIP staff*

The Council (CSIR) has the challenge before it that all its institutes serve the people in their respective fields. We have to go even beyond our given mandate. It is a rare opportunity to do creative yet socially relevant science. Employees should be excited by the challenges and opportunities and be mentally engaged deeply with their work. "Use your opportunities for service", he said, adding, "Selfless work generates bliss and showers nectar. The mandate of the CSIR-IIP is that of energy and to serve people, to do industrial service. You should always keep in mind the saying of our Hon'ble Prime Minister and ask yourself how you are serving the common man. Today, our CSIR is being looked up to by the whole country and we should not disappoint the motherland". The programme of Dr Sahni also included visits to the laboratories of the Institute and he also held discussions with its scientific & technical community.

### A word from the Director...

The first quarter of the new financial year came with a special challenge for CSIR-IIP - to bring in project funding quickly to maintain the momentum from the just-concluded XII Five-Year Plan projects. Team CSIR-IIP rose admirably to the challenge with a slew of activities across all Divisions, supported ably by the Research Planning & Business Development Division. Inspired by the visit of our beloved Director-General CSIR, Dr Girish Sahni, who exhorted greater focus on commercially and societally relevant research, 10 new sponsored projects were commenced even as 14 were completed during the quarter.



A special highlight of the quarter was the National Technology Day Symposium on "Shaping the Energy Future: Challenges & Opportunities (SEFCO-2017)", conceived and executed almost entirely by the Doctoral Students of CSIR-IIP. From identifying eminent speakers to raising funds through sponsorship, our students showed their readiness for greater responsibilities as they prepare to go out into the wide world beyond CSIR.

In keeping with the national priorities for reduction of crude oil imports by 10% and mitigation of greenhouse gas emission intensity of GDP in line with India's INDC commitments to the COP-21 Paris accord on Climate Change, we need to ensure that every division, area, group and scientist critically examines the relevance of their research to national imperatives and helps the Institute accelerate delivery of our mandate. While much has been accomplished, much is to be done; this was also reiterated during our Foundation Day celebrations by our distinguished former Directors Dr T S R Prasad Rao and Mr Sudhir Singhal.

Let us pledge, once again, to deliver people-centric technology with world-class science. And do so in a safe, environmentally-sensitive manner.

Best wishes and warm regards,

Anjan

(Dr Anjan Ray)



*A tour of the CSIR-IIP laboratories by Dr Sahni in the company of Dr Anjan Ray, Director, CSIR-IIP*

**DR ANJAN RAY SPEAKS DURING THE 'PETROLEUM & RENEWABLE ENERGY CONCLAVE (PREC-2017)' AT THE DIT UNIVERSITY, DEHRADUN**

Dr Anjan Ray, Director, was one of the eminent speakers at the Petroleum & Renewable Energy Conclave (PREC-2017), held during March 22-24, 2017, at the DIT University, Dehradun.

The Conclave was held in the background of the growing demand for energy in the world, the shift in the pattern of fuel mix and the impact of natural gas as the fastest growing fossil fuel-NG being in ample supply-leads to increase in carbon emissions despite their rate of growth gradually slowing down, and underscores the need to provide energy safely and sustainably.

Dr Ray was the Guest of Honour at the session on Renewable Energy. Speaking of the technology and commercial perspectives of the vast bio-mass potential of the Uttarakhand villages, Dr Ray stressed that Uttarakhand is richly endowed with a bio-diversity of flora and fauna. It also attracts a very large number of tourists into its fragile eco-systems and is at risk from the environmental point of view. The effective utilization of anthropogenic bio-mass in the State offers opportunities to convert waste carbon resources into energy and useful chemicals. Dr Ray suggested that a scientifically robust and economically logical case can be made for self-regulation as well as State regulation on waste reduction, recycle and reuse, especially through segregation and harnessing of bio-mass and waste plastic resources.

Dr Ray was honoured with a shawl and a memento by Prof D N Saraf, Professor of Eminence, DIT University. On this occasion, an MoU on educational & scientific collaboration was also signed between the DIT University & the CSIR-IIP.

**'BIO-FUEL WORKSHOP', NEW DELHI, APRIL 7-8, 2017**

A two-day workshop for CSIR labs working on bio-fuels was organized by the Institute at the CSIR Science Centre (Vigyan Kendra), Lodi Garden, New Delhi, during April 7-8, 2017.

The Inauguration Session started with the introduction of the participants and experts from different ministries. In his opening remarks, Dr Anjan Ray, Director, CSIR-IIP, explained the importance of focussing our efforts to obtain support for commercialization-oriented technology development in this area of national priority. This was followed by Dr Y B Ramakrishna, Chairman, Working Group Bio-fuels, MOP&NG laying out the methodology that the workshop would adopt to identify the thrust areas and the sources of funding for commercialization. Finally, Prof H N Chanakya emphasized the importance of bringing in the end users, i.e., the industry, the defence, and the government organizations on board while making future proposals and roadmaps. Further, he suggested conducting the next meeting within three months.

Several participants from CSIR, ICAR, DST, DRDO, MNRE, MOP&NG and other ministries attended this workshop. Dr Sanjay Bajpai, Adviser/Scientist 'G', DST, Dr Atul Grover, DRDO, Dr Rakesh



*Dr Anjan Ray at DIT University*



*Workshop in progress*

Sharma, Head, DRDO, Mysore and Mr Meena, MNRE, were main delegates in this workshop. Dr Neeraj Atray, Dr Thallada Bhaskar, Dr Jasvinder Singh, Dr Deepti Aggarwal, Dr Mohit Anand & Ms Jayati Trivedi of the Institute participated in this workshop.

**CSIR-IIP FOUNDATION DAY, APRIL 28, 2017**

The Foundation Day of the Institute was belatedly celebrated on April 28, 2017 in place of April 14, 2017, due to various exigencies.



*Mr Sudhir Singhal, Ex-Director, CSIR-IIP and the Chief Guest of the function, lights the lamp*

Speaking as the Chief Guest on the occasion, Mr Sudhir Singhal, Former Director, CSIR-IIP, spoke on the rationalé, background and the events behind the establishment of CSIR-IIP in 1960. He spoke



*Mr Sudhir Singhal addresses*

about the initial challenges faced by the Institute and said that the Institute was one of its kind when it began its journey. Mr Singhal also talked about various achievements of the Institute and also underlined the important role of its mother body, viz., the CSIR. Mr Singhal also shared the memories of his initial days in the Institute.

As the Guest of Honour, another Ex-Director of the

CSIR-IIP, Dr T S R Prasada Rao, termed today's time as one of 'fantastic opportunities' for the Institute and calling it a new and different era, said that the Institute is in good hands and that leadership is important. He called CSIR as a vehicle for the Industry



**Dr T S R Prasada Rao,  
Ex-Director, CSIR-IIP, Guest of  
Honour, at the podium**

and called upon all to take pride in their achievements.

Prior to this, Dr D C Pandey, Chairman, Celebrations Committee, gave his welcome address and talked about the history behind the Foundation Day.

Dr Anjan Ray, Director, CSIR-IIP, expressed his happiness over the celebration of the Foundation Day, and citing examples from his own life, opined that, such Institutes are permanent which have a firm foundation, and that CSIR-IIP is such an institute.



**Dr Anjan Ray, Director,  
CSIR-IIP, addresses**

This was followed by the Chief Guest and his better half, Mrs Kumkum Singhal, felicitating the Badminton and Table Tennis Teams of the Institute which had won the Finals in the Shanti Swaroop Bhatnagar Memorial Tournament organized at Lucknow. The lady employees and the wards of the employees having won positions in various events such as Slow Cycling, Fast Cycling,

Musical Chairs,

Tug-of-war, Throw-ball & Race, were also honoured on the occasion.

Before the conclusion of the programme, the Chief Guest and the Guest of Honour were each honoured with a shawl and a memento.

The programme ended with a vote of thanks by Mr Jaswant Rai, Controller of Administration.

The proceedings were conducted by Mr M C Ratori, Sr. Hindi Officer.

**TWO-DAY NATIONAL TECHNOLOGY DAY SYMPOSIUM ON 'SHAPING THE ENERGY FUTURE: CHALLENGES & OPPORTUNITIES (SEFCO-2017)', MAY 11-12, 2017**

A two-day National Technology Day Symposium on 'Shaping the Energy Future: Challenges & Opportunities (SEFCO-2017)' was inaugurated by Dr Pushpito K Ghosh, Distinguished Professor, ICT, Mumbai, at the Institute on May 11, 2017.

The symposium was envisioned on the global phenomenon of the energy sector passing through a challenging phase amidst growing consumption, stringent environment regulations, need of increased production within the same infrastructure and reduction in carbon emissions. SEFCO-2017 expects to provide a forum for exchange of information, knowledge, experience and networking opportunities in the field of energy efficiency, energy conversion and technologies and alternate fuels for upgrading sources of energy for future generations in this perspective. This symposium consisted of four sessions namely:- Alternate Energy & Fuels, Catalysis for Energy & Environment, Process Intensification & Engineering and Technologies for Future Energy. It had two plenary and nine invited lectures.



**The Chief Guest inaugurating the Workshop**

Academicians, Scientists, Engineers, Govt. Organizations, Researchers from Energy Sector and Pioneers such as CSIR-NCL Pune, IIT Bombay, IIT Madras, CURAJ Rajasthan, CSIR-NEIST Assam, IIT Delhi, IOC Faridabad, RGPIT Amethi, ONGC, Honeywell Technology Solutions and LanzaTech Pvt. Ltd. converged at the Institute to interact with young scientists/researchers on the related issues.

May 11 was chosen for the symposium as since 1999, this day in India is celebrated as the National Technology Day to mark India's technological advancements beginning with the nuclear tests on May 11, 1998 at Pokharan, the first test of India's first indigenous aircraft, 'Hansa' at Bangalore and successful test-firing of a short-range missile, 'Trishul', on the same day. This year's theme for the National Technology Day was 'Technology Enablers of Start-up India'.

On Day One beginning with a rendering of the 'Saraswati Vandana' by the students of the Kendriya Vidyalaya, CSIR-IIP, and initiation with the lighting of the ceremonial inaugural lamp by the Chief Guest and others, Mr Indrajit K Ghosh spoke about the symposium. This was followed by the introduction of the Chief Guest by Mr Amar Kumar Jain, Acting Director, CSIR-IIP. Mr. Jain, setting the tone of the symposium, also spoke about the significance of the day, viz., the National Technology Day, and said that the country is deficient in energy and hence we have to develop new methodologies and technologies to increase it.



**Dr Ghosh giving his inaugural speech**

CSIR-IIP works on energy not only in the field of petroleum but also works on waste management and creating fuels from waste plastics etc.

The Chief Guest, Dr Pushpito K Ghosh, spoke about the relevance of the topic of the symposium and said that the whole world is based on hydrocarbons. He suggested that we find out the ways to extract CO<sub>2</sub> from environment and devise its further applications.



**Prof B Viswanathan**

The Guest of Honour, Prof B Viswanathan, IIT, Madras, said that as scientists we have to look for the technology of the future in this country. As it is, we do research on the basis of the findings of foreign countries but we should do research according to our priorities. We have to conceive new ideas, new materials and proceed accordingly.

Dr Jayati Trivedi compered the Inaugural function. The programme of day one concluded with a Vote of Thanks by Ms Kirtika Kohli.



**Guests releasing a souvenir of the Symposium**

On the last and second day, the symposium saw a perfect blend of research and success stories from various stake-holders. The range of discussion was vast starting from future energy material

to bio- and conventional energy and also process intensification for better results.

The day also witnessed researchers benefit from the views of the delegates from the industry on technologies for future energy. Dr Anjan Ray, Director, CSIR-IIP, chaired the morning session and shared some success stories of various CSIR labs under the Energy Cluster. Dr Soumendra Banerjee from Honeywell Technology



**Dignitaries on the dais**

Solutions described the details of iso-alkyl process using ionic liquids. Mr Puneet Kishore of ONGC shared the initiatives taken by the ONGC Energy Centre towards alternative energy. Mr Sangeet Jain, Director, Lanza Tech., made an excellent presentation on an innovative way of carbon recycling. Mr G D Gupta from the Indian Railway Organization for Alternative Fuels shared various activities initiated by the Indian Railways in this area.

There was a poster session in which about 30 different graphics were presented by the researches in the relevant and contemporary topics adjudged by Dr S M Nanoti, Dr Bir Sain, Dr A K Chatterjee and Dr Y K Sharma, former scientists of the CSIR-IIP. The poster prize winners were Mr Aditya Rai, Mr Subhashish Das and Ms Astha Shukla.

It was experienced that the symposium was a wonderful platform for good interaction. The summary of the symposium was presented by Dr Shubham Paul, Scientist, CSIR-IIP, and the Vote of Thanks was given by Mr Amit Kumar, a Research Scholar.

**WORLD ENVIRONMENT DAY, JUNE 5, 2017**

During the World Environment Day celebrations at the Institute, Mr Sanjay Sondhi, Founder, Titli Trust, was the Chief Guest while Mr Surjeet Singh Khaira, Founder, The Himalayan Geographical Society, Dehradun was the Guest of Honour.

Initiating the programme, Dr Anjan Ray, Director, CSIR-IIP told that the World Environment Day was the brainchild of the World Wildlife Fund, and since it concerned all the people of the world, it was given the word 'World' and not 'International'. Dr Ray introduced the Chief Guest & the Guest of Honour and welcomed them to the Institute.

Mr Sanjay Sondhi, speaking as the Chief Guest, gave a



**World Environment Day Celebrations**



**Mr Sanjay Sondhi**

presentation on 'Biodiversity in the Indian Himalayas' and told that out of the 35 bio-diversity hotspots of the world the Himalayas were one hotspot. He showed some rare species of animals, butterflies, moths, frogs, reptiles and insects in his presentation, and lamented the lack of their proper & complete documentation. He said that Uttarakhand is a bio-diversity paradise. He

also focussed on the butterflies of Uttarakhand & said that we need to find out about the unrecorded species, document them, protect their habitat & species, spread awareness about them & ensure people's involvement as we cannot depend on governmental efforts alone. He also apprised all about the Titli Turst. He called upon all IIP-ians to document the species available in the CSIR-IIP campus.



**Mr S S Khaira**

Mr Surjeet Singh Khaira, Founder, The Himalayan Geographical Society, gave an 'A-B-C' on the protection of environment and said, "The earth doesn't belong to us, we belong to the earth." The earth is under pressure due to deforestation, extinction of species, etc. We should adopt a 'green' view of life, he said, which includes activating our love for nature, adoption of 3R's or

'Reduce, Reuse, Recycle', preserving water, power, paper, educating our friends, finding and recording an unusual insect or

animal in our gardens, developing organic gardens, gifting trees, reducing emissions etc. He underlined the need to bring more areas under forest cover as we are way behind the world target of 33%, being at only 23%.

After this, Mr Devendra Rai of the CSIR-IIP showed some selections from his personal wildlife photography, recording various birds, animals & reptiles, which was appreciated by all.



**'Nature Walk' on World Environment Day**

After a vote of thanks by Dr D C Pandey, Chairman, Celebration Committee, all present participated in a 'Nature Walk' to the tree plantation site, appreciating and understanding the various species of butterflies of the CSIR-IIP campus on the way. The programme closed with mass plantation by the members of the CSIR-IIP family as well as the guests.

The programme was compered by Mr M C Ratori, Senior Hindi Officer.

**VISIT OF AN ETHIOPIAN DELEGATION, JUNE 19, 2017**

A six-member delegation consisting of Mr Dayessa Leta Merga, Mr Girma Regasa Bula, Mr Meki Kebede Bedasa, Mr Lilay Mehamud Usman, Mr Simegn Degu Tesfaye and Mr Mehamud Arebu Ali from the Federal Democratic Republic of Ethiopia visited the



**Dr Anjan Ray vis-à-vis the Ethiopian guests & others**

Institute on June 19, 2017. They held a wide-ranging discussion with the scientific community of the Institute and the Director, Dr Anjan Ray on the on-going research activity at the Institute. Dr Ray gave a presentation covering the full range of the research and developmental work at the Institute to enlighten the visiting team. Following this, the delegation visited the various Laboratories of the Institute viz., the Specialty Chemicals/Products Lab., Adsorption Lab., Waste Plastics Pilot Plant., Nano-technology Lab., Analytical facilities, Advanced Crude Oil Research Centre, Bio-diesel Laboratory and also Glass-blowing & Fabrication Section to get a first-hand feel of the scientific & research atmosphere prevailing here. They showed great interest in different areas of co-operation between the Institute and Ethiopia, especially in the context of the research work planned in their country.



**An inside look by the Ethiopian Delegation at the Institute's facilities and work**

The country with the largest economy (by GDP) showed keen interest in petroleum and petrochemicals-related activity besides skill development and training of their researchers. The delegates also exhibited their interest in the improved jaggery unit (*gur bhatti*), which is not only economical but also enhances production.

The visit of the Ethiopian Delegation was co-ordinated by Dr D C Pandey, Head, Technical Directorate.

**MoU's/NDA's SIGNED**

- MoU with DIT University, Dehradun, on 'Academic Co-operation', March 24, 2017.



**Dr Anjan Ray & Prof K K Raina exchange the MoU documents**

- MoU (NDA) with the M/s Atul Limited, Ahemdabad for 'Catalytic cracking of cresol dimers into its monomers at bench-scale level (1 kg/day) over equilibrium fluid catalytic cracking catalyst', June 7, 2017.

**RESEARCH ACTIVITIES**

**Sponsored Projects Taken Up**

- Analysis of fire-resistant hydraulic fluid "HISAFE HFDU-68 UG"
- Evaluation of fire-resistant hydraulic fluid
- Analysis of fuel oil
- Naphtha distillation and CS<sub>2</sub> measurement
- Short evaluation studies on crude oil sample
- Effect of interaction of nano-structural noble metals with solid acids and/or bases on the catalytic activity for selective organic transformations
- Short evaluation studies on crude oil
- Development and endurance of heavy-duty engines
- Evaluation of fuel additive for fuel economy and mass emissions
- Development of halogen-free ionic liquids as lubricant additive for enhancement of lubrication properties

**In-house Projects Taken Up**

- Development of phosphate ester-based lubricants and additives and their tribological investigations

**Sponsored Projects Completed**

- Technology development for simultaneous production of pure benzene and US-grade gasoline from FCC C6 heart cut (deisohexaniser side cut), generation of technology information package (TIP) and support during development of the BDEP
- Bench-scale reaction studies on ionic catalyst for syngas production through combined dry reforming and partial oxidation of methane
- Development of rubber extender oil from clarified slurry oil
- Scientific study of operating product losses in SKO/HSD incurred by SKO dealers / HSD retail outlets
- Short evaluation studies on condensate samples
- Short evaluation studies on crude oil sample from the Assam oil field
- Studies to establish the cause of colour instability of ATF product and identification of responsible components
- Detailed evaluation studies on Rajahmundry crude oil sample
- Detailed evaluation studies on eastern offshore asset crude oil
- Detailed evaluation studies on Cauvery Composite Crude Oil and Madanam Crude Oil

- Detailed studies on sediment of 100 II fuel sample
- Short evaluation of Jodhpur Crude Oil
- Analysis of furnace oil samples

## RESEARCH OUTPUT

### Papers Published

- Challenges and prospects of xylitol production with whole-cell bio-catalysis: A review, Diptarka Dasgupta, Seetal Bandhu, D K Adhikari and Debashish Ghosh, Microbiological Research, **197**, 9-21, April 2017
- Self-driven graft polymerization of vinyl monomers on poultry chicken feathers in the absence of initiator/ catalyst, Padma Lata Patnam, S S Ray, A K Chatterjee and Suman L Jain, Journal of Applied Polymer Science, **134**(13), April 2017
- Meliorate optical textures and mesophase contents by promising approach of deasphalting of petroleum residues, Subhash Kumar and Manoj Srivastava, Journal of Industrial and Engineering Chemistry, **48**, 133-141, April 2017
- Crystal structure of fractionally crystallized waxes isolated from crude oil, Manisha Sahai, Ajay Kumar and Sanat Kumar, J of Applied Crystallography, **50**(2), 639-642, April 2017
- Influence of operating parameters on the tribological performance of oleic acid-functionalized Cu nano-fluids, Ajay Kumar, G D Thakre, Pankaj K Arya and A K Jain, Industrial & Engineering Chemistry Research, **56**(13) 3527-3541, April 2017
- Core-shell structured reduced graphene oxide wrapped magnetically separable rGO@CuZnO@Fe3O4 microspheres as superior photo-catalyst for CO2 reduction under visible light, Pawan Kumar, Chetan Joshi, Alexandre Barras, Brigitte Sieber, Ahmed Addad, Luc Boussekey, Sabine Szunerits, Rabah Boukherroub and Suman L Jain, Applied Catalysis B: Environmental, **205**, 654-665, May 2017
- Post-combustion capture and simultaneous conversion of carbon dioxide using histidine-derived ionic liquid at ambient conditions, Pradeep Kumar, Manish Varyani, Praveen K Khatri, Subham Paul and Suman L Jain, Journal of Industrial and Engineering Chemistry, **49**, 152-157, May, 2017
- Carbon nitride-grafted cobalt complex (Co@npg-C3N4) for visible light-assisted esterification of aldehydes, Anurag Kumar, Pawan Kumar, Abhishek Kumar Pathak, Appala Naidu Chokkapu and Suman L Jain, Chemistry Select, **2**(12) 3437-3443, 2017
- Efficient solar photo-electrochemical hydrogen generation using nano-crystalline CeFeO3 synthesized by a modified microwave-assisted method, Nilesh R Manwar, Rajnikant G Borkar, Rohini Khobragade, Sadhana S Rayalu, Suman L Jain, Amit K Bansiwala and Nitin K Labhsetwar, International Journal of Hydrogen Energy, **42**(16), 10931-10942, 2017
- Role of caesium in higher alcohol synthesis over modified copper-cobalt nano-composites under mild conditions, Subhasis Das, Manideepa Sengupta and Ankur Bordoloi, ChemCatChem, **9**(10) 1845-1853, May 2017
- Multiple functionalities of Ni nano-particles embedded in carboxymethyl guar gum polymer: catalytic activity and super-paramagnetism, Debasmita Sardar, Manideepa Sengupta, Ankur Bardolui, Md. A Ahmed, S K Neogi, Sudipta Bandyopadhyay, Ruchi Jain, Chinnakonda S. Gopinath and Tanushree Bala, Applied Surface Science, **405**, 231-239, May 2017
- Investigation of anti-wear performance of automobile lubricants using thin-layer activation analysis technique, Jayashree Biswal, G D Thakre, H J Pant, J S Samantray, Pankaj K Arya, S C Sharma and A K Gupta, Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, **399**, 69-73, May 2017
- Lipids of Rhodotorula mucilaginosa IIP132 with bio-diesel potential: oil yield, fatty acid profile, fuel properties, Mahesh Khot and Debashish Ghosh, Journal of Basic Microbiology, **57**(4), 345-352, 2017
- Fabrication of Visible-Light-Responsive InVO4 for Photo-reduction of CO2, Nikita Singhal and Umesh Kumar, Chemistry Select, **2**(12), 3534-3537, 2017
- Slurry-phase hydro-cracking of residue with ultra-dispersed MoS2 catalysts prepared by micro-emulsion methods, Ravindra Prajapati, Kirtika Kohli and S K Maity, Energy & Fuels **31**(4) 3905-3912, 2017
- Synthesis effects on activity and stability of Pt-CeO2 catalysts for partial oxidation of methane, Rajib Kumar Singha, Astha Shukla, Aditya Yadav, Sumit Sain, Chandrasekhar Pendem, L N Siva Kumar Konathala and Rajaram Bal, Molecular Catalysis, **432**, 131-143, May 2017
- Effect of zeolite pore morphology on solvent-less alkylation of benzene with 1-hexene, Sandeep K Saxena, N Viswanadham and Ala'a H Al-Muhtaseb, Materials Today Chemistry **4**, 45-52, June 2017
- Flow investigation in an industrial-scale soaker using radiotracer technique, H J Pant, Sunil Goswami, V K Sharma, S K Maity and M O Garg, Applied Radiation and Isotopes **124**, 119-123, June 2017
- Octadecanethiol-grafted molybdenum disulphide nano-sheets as oil-dispersible additive for reduction of friction and wear, Sangita Kumari, Harshal P Mungse, Rashi Gusain, Niranjana Kumar, Hiroyuki Sugimura and Om P Khatri, FlatChem, **3**, 16-25, June 2017
- Modified revamp process to reduce energy use in an SDA unit, Sunil Kumar, S M Nanoti, M O Garg, R Amutha and M V N Nandagopalu, Hydrocarbon Processing, **96**(6), 43-46, June 2017

### Patent(s) Sealed Abroad

- A composition for calorimetric detection of water in hydrocarbon fuels and a process for preparation thereof, Praveen K Khatri, Suman L Jain, Indrajit K Ghosh, Umesh Kumar, A K Chatterjee and M O Garg, USA, Patent No. 9,638,680, dt. 05.05.2017

## TRAINING PROGRAMMES ORGANIZED

Programmes on Petroleum Refining Technology

- For the Graduate Engineer Trainees of the Indian Oil Corporation Limited (IOCL), New Delhi, April 10-May 27, 2017



*Trainees & Faculty of the Programme, April 10 - May 27, 2017*

## EXCHANGE OF KNOWLEDGE

Papers Presented in Conferences/Seminars/Symposia

**National Conference on Emanations of Sustainable Technologies in Engineering, Science, Management and Education at Manav Rachna University, Faridabad, April 1, 2017**

- Study of friction and wear in boundary-lubricated journal bearings, *G D Thakre, Pooja Garg, P Das, Pankaj K Arya and A K Jain*

**WCX17 SAE World Congress, Detroit, Michigan, USA, April 4 -6, 2017**

- Refinement of the legislative test cell conditions based on local real-world ambient conditions, *Sunil K Pathak, Yog Raj Singh, Vineet Sood and M O Garg*
- Application of DME20 fuel in a gasoline passenger car to comply with the Euro-IV emission legislation, *Sunil K Pathak, Yog Raj Singh, Vineet Sood and M O Garg*
- Impact of break-in running of a portable genset engine on exhaust emission and fuel consumption, *Sunil K Pathak, Yog Raj Singh, Vineet Sood and M O Garg*
- On-road vehicle driving and energy requirements: its impact on unregulated exhaust emission, *Sunil K Pathak, Yog Raj Singh, Vineet Sood and M O Garg*

**21<sup>st</sup> Refinery Technology Meet (RTM), organized by CHT, Visakhapatnam, April 20-22, 2017**

- Efficient process for production of 1,3 Butadiene from mixed butane/butene mixture via oxidative dehydrogenation, *Umesh Kumar, Indrajit K Ghosh and Suman L Jain*
- Micro-crystalline waxes from industrial polyolefinic by-product, *Manisha Sahai, Ajay Kumar and Sanat Kumar*
- A vacuum swing adsorption process for recovery of propylene

and nitrogen from polymerization unit purge gas, *Swapnil Divekar, Sandeep Singh, Deepika Dangi, Rekha Chauhan, Pushpa Gupta, Soumen Dasgupta and Anshu Nanoti*

## Colloquia and Talks

- Dr Arghya Banerjee, Post-doctoral Research Fellow, Nanyang Technological University, Singapore, *Modelling guided catalyst design for Fischer-Tropsch synthesis*, April 7, 2017
- Dr Manjeet Singh, Former President and CEO, Murli Krishna Pharma Pvt. Ltd., Pune, *White bio-technology - making a car from corn and potatoes*, April 13, 2017
- Dr Raju Dey, University of Bergen, Norway, *Surface Organo-metallic chemistry: development of well-defined heterogeneous catalysts for alkane metathesis reaction*, April 19, 2017
- Dr G Mohanakrishna, Visiting Scientist, Department of Chemical Engineering, Qatar University, Doha, Qatar, *Bio-energy generation from industrial emissions and effluents: an integrated approach towards sustainable bio-refineries*, April 24, 2017
- Dr Soni Mishra, Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, *Raman spectroscopy: A potential technique in the characterization of drugs and drug delivery systems*, June 1, 2017
- Dr Raju Dey, Post-doctoral Research Fellow, University of Bergen, Norway, *Surface organo-metallic chemistry: development of well-defined heterogeneous catalysts for alkane metathesis reaction*, June 2, 2017

## DISTINGUISHED VISITORS

- Dr Ian Shannon, Global Head, Shell B2C Lubricants Technology and Dr Srikant Viswanath, Global Technology Manager, Shell India Markets Pvt. Ltd., Mumbai, April 5, 2017
- Dr Dipak Jyoti Kalita, Chief Chemist, Oil India Limited, Duliajan, Assam, April 12, 2017
- Mr Keshar Singh Pataki, Manager, Centre for Science and Environment, New Delhi, April 12, 2017
- Mr Chetan Mittal, Sr. Manager, Haldor Topsoe, New Delhi, May 2, 2017
- Mr Surendra Pratap, Director (R&D), Mr P K Purkayastha, Additional Director (R&D), and Mr M P Bangwal, Dy Director (R&D), Petroleum Conservation Research Association (PCRA), New Delhi, May 8-9, 2017
- Dr A S Kathait, Deputy General Manager (Lube-QC), Indian Oil Corporation Ltd., Mumbai, May 8-9, 2017
- Mr Sunil Halder, Chief Manager and Mr Japinder Singh, Dy General Manager, GAIL India Ltd., NOIDA, May 11-12, 2017
- Mr G K Gupta, Chief Mechanical Engineer, Indian Railways Organisation for Alternative Fuels, Ministry of Railways, New Delhi, May 12, 2017
- Dr S K Singh, Director-General, National Institute of Solar Energy, New Delhi, May 12, 2017

- Mr H R P Yadav, Director, Institution of Engineers, New Delhi, May 12, 2017
- Dr DT Gokak, Sr. Manager and Mr Chiranjeevi Thota, Manager, BPCL, NOIDA, May 26, 2017
- Delegation of Ethiopia, Mr Dayessalet Merga, Mr Girma Regasa Bula, Mr Meki Kebede Bedasa, Mr Lilay Mehamud Usman, Mr Simegn Degu Tesfaya and Mr Mehamu Arebu Ali, June 19, 2017
- Dr Manisha Sharma and Dr Anand Chakinala, Manipal University, Jaipur, June 20, 2017
- Mr N Rajeswaran, Technical Officer, G L S Petro-chemicals Pvt. Ltd. Chennai, June 21, 2017

#### INTERNATIONAL VISITS

- Mr Vineet Sood, Senior Technical Officer, 'WCX™ 17: SAE World Congress', Detroit, Michigan, USA, April 4-6, 2017
- Dr O P Khatri, Senior Scientist, Department of Materials Science and Nano-engineering, Rice University, USA under Raman Research Fellowship of the CSIR, May 14 - August 13, 2017
- Devendra Singh, Senior Scientist, and Dr Sanat Kumar, Senior Principal Scientist, FAU Friedrich-Alexander Universität Erlangen-Nürnberg, BMBFm, Germany, June 19-23, 2017
- Mr Bappi Paul, Post-doctoral Fellow and Ms Reena Goyal, SRF, '67<sup>th</sup> Nobel Laureates Meeting', Lindau, Germany, June 25-30, 2017

#### PARTICIPATION IN CONFERENCES / SEMINARS / WORKSHOPS / BRAINSTORMING SESSIONS / DISCUSSIONS / LECTURES

- Mr Pranab Das, Scientist, 'National Conference on Emanations of Sustainable Technologies in Engineering, Science, Management and Educations-2017 (ESTESME-2017)', organized by the Manav Rachna University, Faridabad, April 1, 2017
- Dr Anand Mohit, Scientist and Ms Jayati Trivedi, Scientist, '2<sup>nd</sup> Annual Conference on Energy Needs of the Indian Railways', New Delhi, April 6-7, 2017
- Dr Anjan Ray, Director, 'Workshop for CSIR Laboratories Working on Bio-fuels', organized by CSIR-IIP, CSIR Science Centre, New Delhi, April 7-8, 2017
- Mr Sudhakar Reddy, Scientist, 'International Workshop on Science, Technology, Innovation and Management for Water Sustainability (STIM-WS)', organized by CSIR-NISTADS, APCTT and UNESCAP, New Delhi, April 19-20, 2017
- Dr Anjan Ray, Director and Mr Saleem Akhtar Farooqui, Scientist, 'Workshop on Clean Fuels for Cooking and Transport: Social, Environmental & Health Benefits', organized in association with the World Petroleum Council, India Habitat Centre, New Delhi, April 27, 2017
- Mr Pranab Das, Scientist, Dr Raj Kumar Singh, Scientist, Dr Sunil Kumar, Senior Scientist and Dr Indu Shekhar, Scientist, 'Workshop on A to Z of Crude Oil', Indian Oil Institute of Petroleum Management (IIPM), Gurgaon, organized by the

IOCL and the Petroleum Federation of India, May 1-2, 2017

- Dr Anjan Ray, Director, delivered a lecture in the 'CSIR Leadership Development Programme To Inculcate Leadership Capabilities in the Scientists for Competitive Advantage and Performance', CSIR-HRDC, Ghaziabad, May 22, 2017
- Dr Anjan Ray, Director, 'Technology Need Assessment for Climate Change: Stake-holder Consultation Workshop for Renewable Sector', India International Centre, New Delhi, May 23, 2017
- Dr Anjan Ray, Director, gave a presentation in the two-day 'Conference on Catalysis for Sustainable Technologies', CSIR-NCL, Pune, June 8-9, 2017
- Mr Pankaj Arya, Scientist, 'Conference on Green Power-Innovation and Challenges', organized by NTPC, PMI, NOIDA June 8-9, 2017
- Dr Anjan Ray, Director, gave a presentation on the 'Incubation Centre Scheme' organized by the Strategic Business Group of the DG-CSIR, CSIR Headquarters, New Delhi, June 22, 2017
- Dr Jasvinder Singh, Mr Sunil Pathak, Dr Bipul Sarkar, '8th Environment Summit', organized by CII, Dehradun, June 29, 2017

#### IMPORTANT MEETINGS ATTENDED/VISITS

- Dr Anjan Ray, Director, CSIR-IIP's Visits & Meetings:
  - ❖ 'Review meeting of the Cluster Committee - Chemical Sciences', Science Centre, New Delhi, March 31 - April 1, 2017
  - ❖ 'National Steering Committee on Transport Sector for Technology Need Assessment Project of TIFAC', TIFAC Office (Vishwakarma Bhavan), New Delhi, April 3, 2017
  - ❖ Meeting on various projects under the Nutraceuticals Mission, CSIR Science Centre, New Delhi, April 3, 2017
  - ❖ 'First meeting of the Oil Industry Safety Awards Selection Committee of the Oil Industry Safety Directorate', MP&NG, Govt of India, OISD, OIBD Bhawan, NOIDA, April 5, 2017
  - ❖ 'First meeting of the Steering Committee', TIFAC Office (Vishwakarma Bhavan), New Delhi, April 5, 2017
  - ❖ Physical verification meeting at FTL-NOIDA, April 6, 2017
  - ❖ With the Indian Railways and the National Institute for Solar Energy, New Delhi, April 6, 2017
  - ❖ Along with Dr Anshu Nanoti, Senior Principal Scientist, anticipatory meeting for the Directors' Conference, CSIR-IICT, Hyderabad, April 8-9, 2017
  - ❖ Meeting to submit a draft of an MoU, Ministry of Chemicals & Fertilizers, Govt of India, April 10, 2017
  - ❖ Along with Dr Manoj Srivastava, Principal Scientist & Mr Manoj Kumar Thapliyal, Senior Technical Officer, 'Meeting of the Committee for Review of a Proposed CSIR-IIP Field Study on the Effectiveness of Different Measures Taken up by OMCs on Benzene Emission at Indian Petrol Pumps', Delhi, April 13, 2017
  - ❖ 21<sup>st</sup> Refinery Technology Meet ('Refining to Petrochemicals -

*The Way Ahead'*), organized by the Centre for High Technology, Ministry of Petroleum, Govt of India, Visakhapatnam, April 20-22, 2017

- ❖ *2<sup>nd</sup> Meeting of the Safety Award Committee for finalization of 'Oil Industry Safety Award' of the Oil Industry Safety Directorate for the year 2015-16, Visakhapatnam, April 21, 2017*
- ❖ *'Meeting to Assess the Promotion of the Management of Science, Technology and Policy Studies on the basis of Work Reports', RAB, CSIR Complex, Pusa, New Delhi, April 25, 2017*
- ❖ *Along with Dr N Viswanadham, Senior Principal Scientist and Dr Ankur Bordoloi, Scientist, 'Second Meeting of the Domain Expert Group', CSIR Science Centre, New Delhi, April 25, 2017*
- ❖ *'Meeting on short-term bridge courses by Industries/ Institutes', Centre for Entrepreneurship Development (CED), Ahmedabad-Gandhinagar, April 26, 2017*
- ❖ *'Directors' Conference and CSIR Review Meeting' under the Chairmanship of the Hon'ble Minister (S&T)/VP-CSIR at CSIR-NPL, New Delhi, May 5-6, 2017*
- ❖ *'16<sup>th</sup> Meeting of Methods of Sampling and Test for Petroleum, its Products', Gaseous Fuels and Lubricants Sectional Committee, PCD-1', BIS, New Delhi, May 15-16, 2017*
- ❖ *'31st Governing Council Meeting of Society for Petroleum Laboratories', Fuel Testing Laboratory', NOIDA, May 17, 2017*
- ❖ *'Meeting of the Strategic Business Development Group', CSIR Science Centre, New Delhi, May 18, 2017*
- ❖ *'Project Monitoring Committee (PMC) & Project Steering Committee (PSC) Meeting for the SAC Project on Residue Hydrocracking', NOIDA, May 19, 2017*
- ❖ *'3<sup>rd</sup> & Final Safety Awards Evaluation Committee Meeting on Finalization of Oil Industry Safety Awards for the year 2015-16', OISD, NOIDA, May 20, 2017*
- ❖ *'CSIR-CBRI Management Council Meeting', CSIR-CBRI, Roorkee, May 25, 2017*
- ❖ *'Discussion on Energy Solutions and Possible Modes of Collaboration and Co-ordination between CSIR Laboratories', AICTE, New Delhi, June 2, 2017*
- ❖ *'Meeting on Outcome Review of the National Laboratories Scheme', CSIR-CLRI, Chennai, June 14, 2017*
- ❖ *'Meeting of the Steering Committee the Centre for High Technology (CHT)', Bengaluru, June 16, 2017*
- ❖ *'नगर राजभाषा कार्यान्वयन समिति (कार्यालय-2), देहरादून की पांचवीं छमाही बैठक', श्री जसवंत राय, प्रशासन नियंत्रक तथा श्री एम सी रतूड़ी, वरिष्ठ हिंदी अधिकारी के साथ, ओ एन जी सी, देहरादून, 20 जून, 2017*
- ❖ *'Review Meeting of CSIR FTT Projects under Chemicals, Petrochemicals and Healthcare Scheme', CSIR Science Centre, New Delhi, June 29-30, 2017*
- ❖ *'Meeting Regarding the Project on Diesel Flash Point Studies', SIAM, New Delhi, June 30, 2017*

## HRD/AWARENESS EVENTS

### Programmes at the CSIR-HRDC, Ghaziabad

- Dr Manoj Srivastava, Principal Scientist and Mr Jassu Kumar, Assistant, 'Training programme on Effective Implementation of RTI Act and Record Management', April 6-7, 2017
- Mr Avinash Suryakant Mhetre, Scientist, Dr Aruna Kukrety, Technician and Dr P Nagendramma, Technician, 'Training programme on Intellectual Property Rights and Related Issues', April 19-21, 2017
- Mr Amit Sharma, Technical Officer, Mr S L N Shivakumar Konthala, Technical Assistant and Chanrashekhar Pendem, Technical Assistant, 'Training on Capacity Building Programme', April 24-28, 2017
- Dr Ajay Kumar, Senior Scientist, Mr Pankaj Kumar Arya, Scientist and Mr Manoj Thapliyal, Senior Technical Officer, 'Training Programme on Socio-Economic Impact of R&D Outcomes', April 26-28, 2017
- Mrs Poonam Gupta, Senior Principal Scientist, Mr Jaswant Rai, CoA, Mr A C Gairola, F&AO and Mr Prasenjeet Mitra, SPO, 'Training Programme on Managerial Effectiveness for Common Cadre Officers and Scientists', May 17-19, 2017
- Mr Manoj Srivastava, Principal Scientist and Dr V V D N Prasad, Principal Scientist, 'CSIR Leadership Development Programme', May 22-26, 2017

### Other Programmes

- Dr Anjan Ray, Director, 'Workshop on Science & Technology Challenges and R&D Needs of Oil & Gas and Energy Sectors', AICTE HQ, New Delhi, May 10, 2017
- Mr Rajesh Kumar, Principal Scientist, 'Two-Day Programme on Finance for Non-Finance Executives' for CSIR Directors and HoDs, organized by CSIR-HRDC and CSIR Headquarters, NIFM, Faridabad, May 18-19, 2017

## EXPOSURE OF STUDENTS TO OUR SCIENTIFIC INTELLECT & INFRASTRUCTURE

Visits of different groups of students/cadets/trainees/faculty members from the following institutions/colleges/regions/states:

- A team of 27 students of BTech (Chemical Engineering) and 3 faculty members, Rajiv Gandhi Institute of Petroleum Technology, Rae Bareilly, UP., April 6, 2017
- A team of 12 students of MSc (Chemistry/Physics), Baba Farid



Visiting students of the Integral University, Lucknow

Institute of Technology (BFIT), Dehradun, April 25, 2017

- A team of 29 students of BSc (Hons.) & MSc (Industrial Chemistry), Integral University, Lucknow, UP, along with 5 faculty members, May 19, 2017

#### IMPORTANT MEETINGS

- 27th Management Council Meeting, June 20, 2017

#### HEALTH CAMPS

- A free eye check-up camp, by the Amritsar Eye Clinic, Dehradun was organized by the CSIR-IIP Health & Family Welfare Centre, June 7, 2017
- A free camp on anti-Hepatitis-B vaccination of was organized by the CSIR-IIP Health & Family Welfare Centre, June 13, 2017

#### INTERNATIONAL DAY OF YOGA, JUNE 21, 2017

- In the spirit of the initiative taken by our Hon'ble Prime Minister Shri Narendra Modi, and as per the unanimous declaration of the date of June 21 as the International Day of Yoga by the United Nations General Assembly, the CSIR-IIP organized a 'Yoga Shivir' at the CSIR-IIP Community Centre within its campus on June 21st, 2017 under the tutelage of Mananeeya Shri Ram Chandraji, a renowned social worker with expertise in Yoga.



*'Yoga Shivir' on the International Day of Yoga*

- The Shivir was initiated with the words of welcome by Dr Anjan Ray, Director, CSIR-IIP, who also spoke about the various benefits of Yoga. Dr D C Pandey, Head, Technical Directorate, introduced the Yoga Guru and further expounded on the fruitfulness of Yoga in daily life.
- The Shivir was attended by Shri Jaswant Rai, Controller of Administration, CSIR-IIP, Dr Anshu Nanoti, Sr. Principal Scientist, CSIR-IIP, Dr S M Nanoti, Ex-Chief Scientist, CSIR-IIP and other CSIR-IIP staff along with their family members with the objective of availing the proven benefits of Yoga in improving the mental, physical and spiritual health of the mankind.
- The Shivir concluded with the administration of an oath on health by Dr Anjan Ray.
- The Shivir was convened by Dr Lalita Bakaya, Sr. Resident Medical officer, CSIR-IIP and co-ordinated by Dr D C Pandey, Head, Technical Directorate, while the venue-preparation

etc. was overseen by Mr Naveen Maurya, Secretary, CSIR-IIP Staff Club. Mr Deependra Tripathi, Technical Assistant, CSIR-IIP, played a key role in connecting with the Yoga-Trainer.

#### HONOURS & AWARDS

##### CSIR -IIP bags Technology Development Board (TDB) National Award for Successful Commercialization of Indigenous Technology for Wax Production at Numaligarh Refinery Limited (NRL), ASSAM

- Honorable President of India, Shri Pranab Mukherjee awarded prestigious National Award 2017 instituted by the Technology Development Board (TDB) to the CSIR-IIP for successful commercialization of indigenous technology for Wax Production at Numaligarh Refinery Limited (NRL), Assam, on the occasion of the 19th National Technology Day function organized by the Ministry of Science and Technology at Vigyan Bhawan, New Delhi, May 11, 2017



*The then Hon'ble President of India  
Mr Pranab Mukherjee awarding the CSIR-IIP Team*

- The ISEES Young Scientist Award-2017 was conferred upon Mr M K Shukla, Senior Scientist in the '1st ISEES International Conference on Sustainable Energy and Environmental Challenges (SEEC-2017)', Centre of Innovative and Applied Bio-processing (CIAB), Mohali, February 26-28, 2017. (Late Reporting-Ed.)



*Mr M K Shukla receives the ISEES Award*

- Mr Mritunjay Kumar Shukla, Senior Scientist was awarded the 'Rashtriya Gaurav Award' & the Certificate of Excellence by the India International Friendship Society, for 'Meritorious

services, outstanding performance and remarkable role'. The award was given by Dr Bhisma Narain Singh, Former Governor of Tamilnadu & Assam at a Seminar on Economic Growth and National Integration, New Delhi, May 27, 2017



'Gaurav Award' to Mr M K Shukla

### डॉ भीमराव अम्बेडकर (बाबा साहेब) के 126वें जन्मोत्सव का आयोजन, 14 अप्रैल 2017

सीएसआइआर-भारतीय पेट्रोलियम संस्थान (सीएसआइआर-आइआइपी) में डॉ भीम राव अम्बेडकर (बाबा साहेब) के 126वें जन्मोत्सव का आयोजन अनुसूचित जाति/अनुसूचित जन जाति कर्मचारी कल्याण संगठन के तत्वावधान में किया गया।

सर्वप्रथम श्री हाकिम सिंह, अध्यक्ष, अनुसूचित जाति/अनुसूचित जन जाति कर्मचारी कल्याण संगठन ने मुख्य अतिथि श्री अमर कुमार जैन, का पुष्प-गुच्छ से स्वागत किया। बाबा साहेब के चित्र पर माल्यार्पण एवं पुष्पांजलि-अर्पण के साथ वक्ताओं ने उनके जीवन एवं कार्यों पर विस्तृत रूप से अपने विचार प्रकट किए।

श्री अमर कुमार जैन, कार्यकारी निदेशक, सीएसआइआर-आइआइपी एवं कार्यक्रम के अध्यक्ष ने सभी उपस्थितों का अभिनंदन करते हुए बाबा साहेब को इस देश के लिए एक वरदान बताया और उनके महत्व व कार्यों को रेखांकित किया। उन्होंने कहा, "मैं से ऊपर उठकर 'हम' का भाव होना चाहिए। समाज के प्रति भी कर्तव्य का निर्वहन आवश्यक है। सामाजिक समता आवश्यक है। वंचितों को अवसर मिलना चाहिए। ऊपर उठे हुए, विकास-प्राप्त व्यक्ति को दूसरों के लिए अवसर छोड़ना चाहिए। शक्ति प्राप्त होने पर उसका प्रयोग दूसरों की भलाई के लिए



श्री अमर कुमार जैन, कार्यकारी निदेशक, अपने विचार व्यक्त करते हुए

आवश्यक है। डॉ अम्बेडकर ने अपने वंचित समाज के लोगो के लिए सोचा, इसलिए महान् बने। अपनी शिक्षा, ज्ञान को भी दूसरों में बांटें।"

### राजभाषा-संबंधी गतिविधियां

#### • 'गूगल वॉइस टाइपिंग' पर कार्यशाला, 26 मई, 2017

राजभाषा हिंदी में मूल काम-काज को बढ़ावा व गति देने के उद्देश्य से 'गूगल वॉइस टाइपिंग' सुविधा पर एक कार्यशाला का आयोजन किया गया, जिसमें मुख्य अतिथि श्री रविन्दर मेंहमी, हिंदी अधिकारी, वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद, नई दिल्ली थे। इसमें संस्थान के कर्मचारियों व अधिकारियों ने बढ़-चढ़ कर भाग लिया।



श्री रविन्दर मेंहमी

#### • सीएसआइआर-मुख्यालय तथा डीएसआइआर के संयुक्त दल द्वारा संस्थान का राजभाषा-संबंधी निरीक्षण 25 व 26 मई, 2017

सीएसआइआर मुख्यालय तथा डीएसआइआर (वैज्ञानिक तथा औद्योगिक अनुसंधान विभाग), भारत सरकार के संयुक्त दल द्वारा दिनांक 25 व 26 मई, 2017 को संस्थान का राजभाषा-संबंधी निरीक्षण किया गया। इस दल में डीएसआइआर की ओर से श्री अ. न. जेना, उप सचिव, श्रीमती नीहारिका सिंह, उप निदेशक, श्री मनोज कुमार दुबे, वरिष्ठ अनुवादक तथा सीएसआइआर मुख्यालय की ओर से श्री रविन्दर मेंहमी, हिंदी अधिकारी व श्री लाल चंद, वरिष्ठ हिंदी अनुवादक सम्मिलित थे। संयुक्त दल ने संस्थान में राजभाषा कार्यान्वयन पर प्रसन्नता व्यक्त की।

#### • नगर राजभाषा कार्यान्वयन समिति, देहरादून के आयोजनों में प्रतिभागिता

30 मई, 2017 को संस्थान की ओर से डॉ (श्रीमती) सुमन लता जैन, वरिष्ठ वैज्ञानिक तथा श्री हाकिम सिंह, वरिष्ठ तकनीकी अधिकारी ने नगर राजभाषा कार्यान्वयन समिति (कार्यालय-2), देहरादून द्वारा ओ एन जी सी में आयोजित 'काव्य-पाठ प्रतियोगिता' में संस्थान का प्रतिनिधित्व किया।

### संस्थान-परिवार के समाचार

#### (क) संस्थान-परिवार में वृद्धि

##### (i) नई नियुक्तियां

- डॉ अंकुश बाबाराव बिंदवाल, वैज्ञानिक 24.04.2017

स्वागत!

#### (ख) संस्थान-परिवार से विदाई

##### (i) अधिवर्षिता पर/सेवा-विस्तारोपरांत सेवा-निवृत्ति

31 मई, 2017

- श्री योगराज, अधीक्षण अभियंता
- श्री मनदेव सिंह, सहायक (वित्त एवं लेखा)-III

30 जून, 2017

- डॉ पूरन सिंह वर्मा, प्रधान वैज्ञानिक

भावभीनी विदाई!

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