



संकल्प

Newsletter

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INAUGURATION OF THE CSIR-IIP IMPROVED GUR BHATTI AT DOIWALLA, DEHRADUN BY MR TRIVENDRA SINGH RAWAT, HON'BLE CHIEF MINISTER, UTTARAKHAND, DECEMBER 22, 2017

Mr Trivendra Singh Rawat, Hon'ble Chief Minister, Uttarakhand, inaugurated an improved jaggery-making plant (*Gur Bhatti*) at Doiwalla, Dehradun, developed at the CSIR-Indian Institute of Petroleum, Dehradun. The CM first pushed a button to commission the *Gur Bhatti* at a function organized at Village Khate, Markham First, Doiwalla. This was followed by a demonstration of some other energy-saving products developed by the CSIR-IIP including an energy-efficient biomass *chulha* (stove) and an energy-efficient vessel. Besides this, the Room-Temperature Process for Biodiesel Production, developed at the Institute, was



Hon'ble CM, Uttarakhand commissions the jaggery plant at Doiwalla

also demonstrated. Following this, Dr Anjan Ray, Director, CSIR-IIP welcomed and introduced the Honourable Chief Minister in a formal function on the site. Remarking on the presence of the CM



Dr Anjan Ray, Director, greets Mr T S Rawat, Hon'ble CM, Uttarakhand

A word from the Director...



The last calendar quarter of 2017 was an exciting one for the CSIR-IIP.

A key highlight of this quarter was the 44th Research Council (RC) Meeting, an opportunity for us to seek guidance from the doyens of industry and academia who help shape our research efforts. The RC underscored the importance of outcome-oriented high-quality research and encouraged our scientists to focus on relevance to national, industrial and societal needs.

Underscoring our commitment to the social and agricultural sector, our advanced jaggery-making units (*Gur-Bhattis*) that enhance livelihoods for sugarcane farmers and superior *Gur* quality due to uniform and controlled heating, achieved the milestone of 40 such units in Uttarakhand and Uttar Pradesh. Mr Trivendra Singh Rawat, Hon'ble Chief Minister, Uttarakhand, personally graced the inauguration of a *Gur Bhatti* at Doiwalla in December.

Earlier, in October 2017, the Newton Bhabha Fund Researcher Links Workshop on 'Energy For Economic Development And Welfare' was a great success, with experts and scholars from the UK and other countries spending 5 days in discourse, dialogue and development of new collaborative projects. Further, an Ethiopian delegation visited the CSIR-IIP in November 2017 to explore mutual co-operation in R&D.

Several workshops, review meetings and events took place during the quarter. Important occasions like Swachh Bharat Abhiyan, Vigilance Awareness Week, Rashtriya Ekta Diwas, Constitution Day were observed with active participation and enthusiasm of our staff and students. The Institute exhibits at the Indian International Science Festival (IISF-2017) Mega Expo, Chennai, were much appreciated.

New MoU's were signed with Honda Cars (I) Ltd and with BPCL R&D. Several papers and a book chapter were published, two foreign patents and one Indian patent granted, and many of our scientists and students presented their papers in various national and international conferences.

While Dr Suman Lata Jain, Senior Scientist, was selected on the Editorial Board of the 'New Journal of Chemistry', Mrs Jayati Trivedi, Scientist, was chosen for the Green Talents-2017 Award and Mr M K Shukla was given the Young Scientist Award.

I thank the CSIR-IIP family for their commitment and success this quarter, and wish everyone the best for the year ahead.

Anjan
(Dr Anjan Ray)



Mr Amar K Jain conducting

as most fortunate, Dr Ray hoped that all the *Gur Bhatti* owners will be benefitted by this technology, it will help reduce pollution, increase production, will enhance the taste of the jaggery produced and will help the health of the farmers and workers. Conducting the programme, Mr Amar Kumar Jain, Chief Scientist, CSIR-IIP, thanked the CM, talked about the technologies developed by the Institute for rural areas, focussing especially on the possibilities of mixing 10% biofuel in the diesel used

in the moving vehicles and stationary plants by the farmers, and said that the Institute could be contacted for help in this matter at any time.

Mr Pankaj Kumar Arya, Scientist, CSIR-IIP, gave the finer details of the technology for the improved *Gur Bhatti* developed by the Institute and said that this plant consumes less fuel, produces more, loses less heat and spreads less pollution which, in turn, will help keep good the health of the workers and farmers. Besides this for workers, better working facility has also been provided in this *Gur Bhatti*. Mr Arya also informed all that more than 40 *Gur Bhattis* are operating on this technology now, and it is the first such *Gur Bhatti* in the Doiwalla area. The sugar-cane to be used in this *Gur Bhatti* will also be a produce of organic farming. Mr Deepak Upadhyaya, who began organic farming in 1994-95, also



Mr Pankaj Kumar Arya talks about the new jaggery plant

expressed his opinion and said that he has been providing organic products like vegetables to the people and requested the Hon'ble CM to link the farmers with the dairies like "Aanchal" for the marketing of vegetables, milk etc., which, in turn, will help the farmers.

While expressing his happiness over the inauguration of the *Gur Bhatti*, the Hon'ble CM Mr Trivendra Singh Rawat congratulated all on this achievement and talked about the possibilities of co-operation of technological collaboration between the CSIR-IIP & the Uttarakhand Government on issues like the industrial use of turpentine oil from pine leaves as a bio-fuel. Shri Rawat termed



Mr T S Rawat makes his point

organic farming as a boon and shared his insight into the finer points of such farming and also talked in detail about the method of making organic fertilizers.

The programme was co-ordinated by Dr D C Pandey, Head, Technical Directorate, CSIR-IIP. The dais was shared, among other VIP's, by the *Gur Bhatti* owner Mr Mukul Tomar, Mr Suresh Pal Tomar, Mr Ishwar Pal and Mr Alok Bhatt.

The function was attended by the senior scientists, senior officers and the other staff of the CSIR-IIP. Among others present were the *Ganna Vikas Adhikaris*, the *Gram Pradhans* from the near-by villages, local farmers as well as various other people.

NEWTON BHABHA FUND RESEARCHER LINKS WORKSHOP ON 'ENERGY FOR ECONOMIC DEVELOPMENT AND WELFARE', OCTOBER 23-27, 2017

CSIR-Indian Institute of Petroleum, Dehradun, in partnership with the University of Surrey, UK organized a five-day workshop from 23rd to 27th October 2017 on 'Energy for Economic Development and Welfare', yet another contribution towards an approach to address the energy-related economic development issues.

The workshop, beginning on a formal note with the lighting of the lamp, was inaugurated by Dr Jhuma Sadhukhan, Co-ordinator of Newton Bhabha Fund Researcher Links Workshops, UK. Sharing the dais with her were Dr Anjan Ray, Director, CSIR-IIP, Dehradun, Dr T Bhaskar, Principal Scientist & Co-ordinator of Newton-



Dr Jhuma Sadhukhan, inaugurates the Workshop along with Dr Anjan Ray, Director



Dignitaries on the dais

Bhabha Fund Researchers Links Workshop, India, Dr Neeraj Atray, Principal Scientist and Dr D C Pandey, Head, Technical Directorate.



Dr Sadhukhan at the podium

Dr Jhuma Sadhukhan from the University of Surrey, UK, shed light on the purpose and objectives of the workshop. The welcome address was given by Dr Thallada Bhaskar of CSIR-IIP on the need for sustainability in energy consumption and economic growth. This was followed by a speech on the contributions of CSIR-IIP and the relevance of the workshop to the Institute's mandate by Dr Neeraj Atray, Principal Scientist, CSIR-IIP,

who said that the Institute had been working on alternative energy systems, taking the lead in the area of lignocellulosic biomass-based fuels & chemicals, bio-jet fuels etc., as well as working on utilization of bio-mass residues. Dr D C Pandey spoke about the background of the programme besides detailing the work of the CSIR-IIP.



Address by Dr Anjan Ray, Director

The session concluded with thoughts on '*Economic development, innovation, and sustainability in the Indian energy scenario and opportunities to jointly address the global issues,*' added by Dr Anjan Ray.

The workshop brought together representative academicians, scientists and engineers from the UK and India under one umbrella to brainstorm on shared concerns and contemporary issues such as sustainable development, waste

utilization and economic growth in the spirit of bilateral co-operation. The event was sponsored by the British Council Researcher Links, Royal Society of Chemistry, and the Newton Bhabha Fund. The programme offered prospects for early career researchers across selected partner countries to form international connections through fully-funded workshops and travel grants. This would provide a significant opportunity for participants to interact with fellow-researchers, professionals and thought leaders working in innovation, sustainability, and effectiveness of energy generation and deployment for economic development at an academic level.

International dignitaries affiliated to highly-regarded organizations such as Aston University, University of Aberdeen, University of Surrey, Cranfield University, University of Manchester, Imperial College, University of Birmingham, Coventry University, and Liverpool John Moores University, attended the workshop. From India, the speakers converged from honoured institutions like the CSIR-Indian Institute of Chemical Technology (IICT), Hyderabad, the CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram, the Institute of Bio-resources and

Sustainable development (IBSD), Imphal, the Indian Institutes of Technology (IIT), Delhi and Roorkee, as also The Energy and Resources Institute (TERI), New Delhi, in addition to the representatives of the host Institute.

Other than lectures and technical presentations, the workshop also comprised of hands-on demonstration sessions, laboratory visits at IIP, and round-table discussions on short-term and long-term collaborations. It was expected that the workshop would help in the translation of laboratory research to address the societal problems and drive innovation of new ideas, materials, and products for the welfare of communities via sharing of expertise between both the countries. Conversely, it would also augment the knowledge of the participants in various research areas to solve the problems in the path of sustainable development across manifold dimensions.

From the Institute, Dr T Bhaskar, Principal Scientist, Dr S S Ray, Senior Principal Scientist, Dr Anshu Nanoti, Senior Principal Scientist, Dr Anil K Jain, Principal Scientist, Dr Neeraj Atray, Principal Scientist, Dr Rajaram Bal, Senior Scientist, Dr Debashish Ghosh, Scientist, Dr Sunil Kumar, Senior Scientist, Dr Sanat Kumar, Senior Principal Scientist, Dr O P Khatri, Senior Scientist, Dr M K Shukla, Senior Scientist, Dr A K Sinha, Principal Scientist, Dr G D Thakre, Senior Scientist, Dr D C Pandey, Principal Technical Officer, Dr Suryadev Kumar, Senior Scientist, Dr Y Sudhakar Reddy, Scientist, Dr Kishore Natte, Senior Scientist and Dr Anand Narani, Scientist, participated.

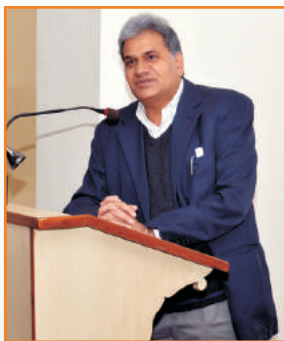


A group photograph of the participants, the Chief Guest and the hosts

WORKSHOP ON 'DEVELOPMENT OF A STATISTICAL MODEL FOR TRADE-OFF BETWEEN FUEL ECONOMY AND CO₂ EMISSION FOR IN-USE 2-WHEELERS IN INDIA', NOVEMBER 17, 2017

A Petroleum Conservation Research Association (PCRA), Ministry of Petroleum and Natural Gas-sponsored workshop on '*Development of a Statistical Model for Trade-Off between Fuel Economy and CO₂ Emission for in-use 2-Wheelers in India*' was organized on 17/11/2017 at CSIR-IIP. Dr Sunil Pathak, Principal Scientist, CSIR-IIP, convened the workshop. The Inaugural Session was chaired by Mrs Poonam Gupta, Senior Principal Scientist & Head, AFLAD. Invitees from PCRA, New Delhi, viz., Mr Surender Pratap, Director & HOD {R&D/Technical (S&L)}, and Mr M P Bangwal, Additional Director (R&D), PCRA, New Delhi as well as Mr A K Jain, Acting Director, CSIR-IIP were present on the dais.

A keynote lecture on technology-based renewable sources of



Mr Surender Pratap speaks

energy, such as solar energy and sustainability of such technology was delivered by Mr Pratap, who alluded to the current world-wide resources of crude oil and focussed on their conservation by switching towards renewable sources of energy.

The workshop, centred on transport sector, aimed at creating awareness towards CO₂ emissions and Fuel Economy and key contributors to GHG emissions in that sector. A statistical model developed by the

CSIR-IIP using Graphical User Interface was demonstrated showing its ease of use to the common man for comparing fuel economy of any vehicle model.



Students visiting the laboratories

Participants included students from the Kendriya Vidyalaya-IIP, Dehradun, the University of Petroleum & Energy Studies, Dehradun, professionals from M/s Tata Motors and various senior scientists from the CSIR-IIP.

The session concluded with remarks by Mrs Poonam Gupta.

ETHIOPIAN DELEGATION VISITS THE CSIR-IIP, DEHRA DUN FOR MUTUAL CO-OPERATION IN R&D, NOVEMBER 9-10, 2017

A seven-member delegation consisting of Dr Alemu Sime, State Minister, Addis Ababa, Ethiopia, Mr Samuel Halala, General Director of Chemical and Construction Inputs Industry Development Institute (CCIIDI), Addis Ababa, Ethiopia, Mr Hadushom Tuem, Deputy-General Director of CCIIDI, Ms Sefora Hailu, Steering Committee, Addis Ababa, Ethiopia, Mr Tesfaye Birhanu, Steering Committee Member at CCIIDI, Dr Tetemke Mehari, Steering Committee Member at CCIIDI and Mr Muhiye Endrie, Testing and Research Directorate Director, Addis Ababa, Ethiopia visited the CSIR-IIP, Dehradun on November 10, 2017.

The delegation had arrived with the aim of signing up a twinning programme for training and mentoring Ethiopian scientists, students and industry professionals in the energy and fuels area at the CSIR-IIP. Such training programmes are envisioned to be carried out there, here or remotely via Skype. CCIIDI is expected to

be our partner there. CSIR-IIP could also offer its talent pool as consultants for industry-specific problems in Ethiopia and also partner in projects with them over there.



The Ethiopian delegation interacts with the scientists of the Institute

After a visit to the following laboratories of the Institute, the delegation held a wide-ranging discussion with the scientific community of the Institute including the Acting Director Mr A K Jain and other senior scientists on the on-going research activity at the CSIR-IIP:

The Hydroprocessing Laboratory, the FCC Pilot Plant, the Sweetening Pilot Plant, the Advanced Crude Evaluation Laboratory, the Bio-mass Conversion Laboratory, the Nanocatalysis Laboratory, the Conversion of Waste Plastics Laboratory and the Synthetic & Applied Chemistry Laboratory.

The delegation showed great interest in bio-mass conversion, waste plastics conversion as well as in training programmes being conducted by the CSIR-IIP.

Dr Anil Jain, Senior Scientist, Dr D C Pandey, Principal Technical Officer and Dr Umesh Kumar, Scientist, escorted the delegation to the aforementioned laboratories.



The host CSIR-IIP and the Ethiopian guests pose for a group photograph in the front lawns of the Institute

MoU's/NDA's SIGNED

Non-disclosure Agreement with M/s Honda Cars India Limited, New Delhi on 'Oil Analysis', November 17, 2017

MoU with M/s Bharat Petroleum Corporation Limited,

NOIDA, on 'Development of LPG Sweetening Catalyst with Improved Foam Control Features', December 4, 2017

RESEARCH ACTIVITIES

Sponsored Projects Taken Up

Testing of performance-grade polymer-modified bitumen of M/s Ooms Polymers as per IRC SP:53:2010
Investigation on characteristic properties of speciality grease
Gear teeth surface distress rating of ZF9 transmission gear box
Studies on wash oil from BPCL petrochemical complex
Development of catalysts for converting bio-mass-derived synthesis gas to fuels via Fisher-Tropsch synthesis
Endurance test on an engine using transient facility
Corrosion inhibitor performance evaluation studies
Endurance test on an engine using transient facility

In-house Projects Taken Up

Development of catalyst and process for the synthesis of styrene from kerosene (STY-Ker)

Sponsored Projects Completed

Comparative testing of tribological properties of Russian and Indian main gear box lubricating oil
Investigation of scuffing load capacity of lubricating oil
NMR analysis of white oil samples
Overall testing and evaluation of FRHF samples "Plantoflux 68 AT-Z" and "Solcenic-3A"
Performance investigation of extreme-pressure behaviour of lubricating oil
Testing of HFB-68 type FRHF
Testing of LEF bottom samples
Oil sample analysis
Design and synthesis of some new heterogeneous nanocatalytic systems and their catalytic application in the production of fuels and fine chemicals
Evaluation of cetane number for UTECH additive
Development of catalytic process for production of isoprene from pure isopentane containing refinery C₅ streams

In-house Projects Completed

Development of heteroatom-doped nano-structured carbon catalyst for speciality chemicals
Synthesis of oxygenates from bio-syngas by using nano-composite catalysts
Development of slurry-phase catalyst for residue upgradation
Deactivation study of hydro-processing catalysts
Bio-degradability test for in-house and outside lubricant samples as per ASTM D5864
Valorization of lignin to value-added chemicals

RESEARCH OUTPUT

Papers Published

Metal-organic hybrid: Photo-reduction of CO₂ using graphitic carbon nitride-supported heteroleptic iridium complex under visible light irradiation, *Anurag Kumar, Pawan Kumar,*

Rajnikanth Borkar, Amit Bansiwala, Nitin Labhsetwar and Suman L Jain, Carbon, 123, 371-379, October 2017

Pyrolysis of *Azolla, Sargassum tenerrimum* and water hyacinth for production of bio-oil, *Bijoy Biswas, Rawel Singh, Bhavya B Krishna, Jitendra Kumar and Thallada Bhaskar,* Bioresource Technology, **242**, 139-145, October 2017

Effects of temperature and solvent on hydrothermal liquefaction of *Sargassum tenerrimum* algae, *Bijoy Biswas, Aishwarya Arun Kumar, Yashasvi Bisht, Rawel Singh, Jitendra Kumar and Thallada Bhaskar,* Bioresource Technology, **242**, 344-350, October 2017

Kinetic modelling for catalytic cracking of pyrolysis oils with VGO in a FCC unit, *D V Naik, Varaha Karthik, Vimal Kumar, Basheshwar Prasad and M O Garg,* Chemical Engineering Science, **170**, 790-798, October 2017

Cu/Cu₂O nanoparticle interface: Rational designing of a heterogeneous catalyst system for selective hydroamination, *Manideepa Sengupta, Subhasis Das and Ankur Bordoloi,* Molecular Catalysis, **440**, 57-65, October 2017

Noble metal-modified TiO₂: selective photoreduction of CO₂ to hydrocarbons, *Nikita Singhal and Umesh Kumar,* Molecular Catalysis **439**, 91-99, October 2017

Lubrication capabilities of amino acid-based ionic liquids as green biolubricant additives, *Ponnekanti Nagendramma, Praveen K Khatri, G D Thakre and Suman L Jain,* Journal of Molecular Liquids, **244**, 219-225, October 2017

Pt-CeO₂ nanoporous spheres - an excellent catalyst for partial oxidation of methane: effect of the bimodal pore structure, *Rajiv K Singha, Astha Shukla, A Yadav, T Sasaki, A Sandapatla, G Deo and Rajaram Bal,* Catalysis Science & Technology, **20**, 4520-4735, October 2017

Extractive desulphurization of gas oils: A perspective review for use in petroleum refineries, *Sunil Kumar, V C Srivastava and S M Nanoti,* Separation and Purification Reviews, **46**(4)319-347, October 2017

MoO₃ nanoclusters decorated on TiO₂ nanorods for oxidative dehydrogenation of ethane to ethylene, *Bipul Sarkar, Reena Goyal, L N Sivakumar Konathala, Chandrashekar Pendem, Takehiko Sasaki and Rajaram Bal,* Applied Catalysis B: Environmental, **217**, 637-649, November 2017

Visible light-assisted photocatalytic CO₂ reduction over In₂O₃: Selective methanol formation, *Nikita Singhal, Reena Goyal and Umesh Kumar,* Energy & Fuels, **31**(11), 12434-12438, November 2017

Determination of the aging profile of pyrolysis oil derived from apricot seed cake through solvent extraction and GC-MS analysis, *D V Naik, Ranjan Kumar, Deependra Tripathi and Pankaj K Kanaujia,* Energy & Fuels, **31**(11), 12297-12304, November 2017

Valorization of waste "date seeds" bio-glycerol for synthesizing oxidative green fuel additive, *Farrukh Jamil, Sandeep K Saxena, Ala'a H Al-Muhtaseb, Mahad Baawain,*

Mohammed Al-Abri, Nagabhatla Viswanadham, Gopalakrishnan Kumar and Ahmad M Abu-Jrai, *Journal of Cleaner Production*, **165**, 1090-1096, November 2017

Heterogeneous hydroamination over supported ionic liquid-stabilized copper ions and its mechanistic study, *Manideepa Sengupta, Subhasis Das, Arijit Bag, Frederic Lefebvre and Ankur Bordoloi*, *ChemistrySelect*, **2**(32), 10387-10392, November 2017

Synthesis of AgWCN_x nanocomposite for one-step conversion of cyclohexene to adipic acid and its mechanistic studies, *Reena Goyal, Sidarth Sameer, Arijit Bag, Bipul Sarkar, Nikita Singhal and Ankur Bordoloi*, *Chemistry: A European Journal*, **23**(65), 16555-16565, November 2017

Evaluation of residue hydrotreating catalysts supported on mesoporous aluminas, *Kirtika Kohli, S K Maity, Ravindra Prajapati, Madhusudan Sau and M O Garg*, *Current Catalysis*, **6**(3), 218-228, November 2017

Thermal decomposition kinetics of sorghum straw via thermogravimetric analysis, *Vaibhav Dhyani, Jitendra Kumar and Thallada Bhaskar*, *Bioresource Technology*, **245**, Part A, 1122-1129, December 2017

Investigating efficacy of Cu nanoparticles as additives for biolubricants, *Pooja Garg, Ajay Kumar, G D Thakre, Pankaj Kumar Arya and Amar K Jain*, *Macromolecular Symposia*, **376**(1), December 2017

2D-structured nanosheets of octadecylamine-grafted graphitic-carbon nitride (g-C₃N₄) as lubricant additives, *Ajay Kumar, Ajay, G D Thakre, Pankaj K Arya and Amar K Jain*, *Macromolecular Symposia*, **376**(1), December 2017

Heterogeneous route : the one-pot synthesis of N-arylamides from aldoximes and aryl halides using the CuO/carbon material, *Md Mominul Islam, Mita Halder, Anupam Singha Roy and S K Manirul Islam*, *ACS Omega*, **2**(12), 8600-8609, December 2017

Chapter : Bio-jet Fuel

D K Adhikari, Book: '*Biorefining of Biomass to Biofuels-Biofuel and Biorefinery Technologies*', Vol 4, 187-201, 2017, Editors : Sachin Kumar and K Rajesh Sani, Published by Springer International Publishing

Patent(s) Sealed Abroad

A process for production of benzene lean gasoline by recovery of high-purity benzene from unprocessed cracked gasoline fraction containing organic peroxides, *M O Garg, S M Nanoti, B R Nautiyal, Sunil Kumar, Prasenjit Ghosh, Nisha, Pooja Yadav, Jagdish Kumar, Manish Tiwari, M R G Rao and N S Murthy*, Russia, Patent No. 2635923, dt. 17.11.2017 and Europe, Patent No. EP2882830, dt. 07.12.2017

A process for preparation of p-toluic acid by liquid phase oxidation of p-xylene in water, *M P Saxena, A K Gupta, S K Sharma, D P Bangwal and Krishan Kumar*, USA, Patent No. 112005003520.4, dt. 04.12.2017

Patent(s) Filed Abroad

Dual Fumigation Homogeneous Charge Compression Ignition (DF-HCCI) Engine, *Wittison Kamei*, USA, Application No. 15/848408 dt 20.12.2017

Patent(s) Sealed in India

An improved process for preparation of tetrabromobisphenol-A, *Suman Lata Jain, Sanny Verma and Bir Sain*, Patent No. 289640, dt. 16.11.2017

Patent(s) Filed in India

Development of eco-friendly and biodegradable lubricant formulation useful for micro electro-mechanical systems and process thereof, *Ponnekanti Nagendramma, Anjan Ray, G D Thakre and Neeraj Atray*, Application No. 201711039235, dt. 03.11.2017

A domestic cooking burner for piped natural gas, *Pankaj K Arya, Satish Kumar, G D Thakre, Amar K Jain and Surendra Pratap*, Application No. 20171104697, dt. 28.12.2017 (*Jointly with PCRA*)

TRAINING PROGRAMMES ORGANIZED

Programmes on Petroleum Refining Technology

For the Chemical Engineers of the Indian Oil Corporation Limited (IOCL), New Delhi, August 28 – October 13, 2017

For the Chemical Engineers of the Indian Oil Corporation Limited (IOCL), New Delhi, November 6 – December 22, 2017



Faculty & student of the training programme during November 6 – December 22, 2017

For the Officers of the Bharat Petroleum Corporation Limited (BPCL), Mumbai, December 4-22, 2017

Other Programmes

Training Programme on '*Testing of Bitumen and Bitumen Emulsion*' for the Executives of M/s Hindustan Colas Private Limited, Mumbai, November 27-29, 2017

EXCHANGE OF KNOWLEDGE

Papers Presented in Conferences/Seminars/Symposia

International Conference on Emerging Trends in Biotechnology for Waste Conversion, organized by BRSI and CSIR-NEERI, CSIR-NEERI, Nagpur, October 8-10, 2017

Investigation of thermal decomposition behaviour and associated thermokinetic parameters for plastic wastes using thermogravimetry, *Vaibhav Dhyani, Jitendra Kumar, Sudhakar Reddy Venumala and Thallada Bhaskar*

Utilization of sugarcane bagasse for production of valuable chemicals, *Ayushi Awasthi, Vaibhav Dhyani, Jitendra Kumar, Sudhakar Reddy Venumala and Thallada Bhaskar*

International Forum for High Potentials in Sustainable Development, Munich, Germany, October 23-25, 2017

Energy products from microalgae as feedstock, *Jayati*

Trivedi, Neeraj Atray and Deepti Agrawal (Chosen for the Green Talents-2017 Award)

International Symposium on Residue Hydrotreating (Residue HydroTreat 2017), Kuwait, November 6-8, 2017

Organic-inorganic nanohybrid catalyst for slurry phase residue hydrocracking, Ravindra Prajapati, Kirtika Kohli and SK Maity

HEMCE-2017: 11th International High-Energy Materials Conference & Exhibits, HEMRL, Pune, November 23-25, 2017

Single-step catalytic conversion of isopentane into isoprene, Narendra S Bisht, Anand Mohit, Saleem A Farooqui, Rakesh Kumar, Rakesh Joshi, TKhan, P Alam, V Venkatesan and Anil K Sinha

9th International Conference on Industrial Tribology, Kolkata, December 6-9, 2017

Organophosphate anion-based ionic liquids for steel-aluminum contact: Enhanced tribo-performance, Amzad Khan, Rashi Gusain, OP Khatri

Chemical functionalization of WS₂ nanoplatelets: A drive towards dispersion stability to enhanced tribo-performance, Sangita Kumari, OP Sharma and OP Khatri

Chemically functionalized graphene oxide: a highly dispersible nano-additive for reduction of friction and wear, Ajay Chouhan, OP Sharma and OP Khatri

Study on tribological performance of journal bearing under boundary lubrication regime, Pranab Das, Pankaj Kumar Arya, Amar K Jain and GD Thakre

An investigation of thermal conductivity and tribological performance of Cu nanofluids, G D Thakre, Aditya Roy, M F Wani and Amar K Jain

Flame propagation of fire-resistant hydraulic fluids in coal mixtures, Pankaj Kumar Arya, S Singh, Rajendra K, Satish K, GD Thakre and Amar K Jain

Bioprocessing India-2017-Beyond Conventions, IIT, Guwahati, December 9-11, 2017

Improving lignocellulolytic enzyme production of *Talaromyces verruculosus* IIPC324 via UV mutagenesis, Lavika Jain and Deepti Agarwal

ITEC, India Conference-2017, Pune, December 13-15, 2017

Effect of different drive modes to energy consumption of an electric auto-rickshaw, Robindro L, Poonam Gupta, Yograj Singh and Praveen Kumar

National Conference on I C Engines and Combustion –(XXVNCICEC-2017), NIT, Surathkal, December 15-17, 2017

Real-world driving parameters and their correlation with NO_x emissions in diesel passenger cars, S K Pathak, Vineet Sood, Yograj Singh and SA Channiwala

Impact of random drive cycle on vehicular fuel economy and emissions, S K Pathak, Vineet Sood and Yograj Singh

Real-world driving-cycle measurements of ultra-fine particle emissions from CNG, LPG, gasoline and diesel passenger cars, S K Pathak, Vineet Sood, Yograj Singh and SA Channiwala

International Conference on Advanced Nanomaterials and Nanotechnology, ICANN-2017, IIT, Guwahati, December 18-21, 2017

Graphene and its inorganic analogues for enhancement of lubrication performance: challenges to opportunities, O P Khatri

Symposium on Contemporary Facets in Organic Synthesis (CFOS-2017), IIT, Roorkee, December 22-24, 2017

Visible light-assisted CO₂ reduction using cobalt(II) phthalocyanine-grafted core-shell Ni/NiO semiconductor, Pankaj Kumar Prajapati, Hari Singh and Suman L Jain

Synthesis and characterization of triazole-based novel multifunctional additives for lubes and fuels, Ekta Fauzdar, Himani Negi, Aruna Kukrety, Viswas Saini, Raj Kumar Singh, Neeraj Atray and SSRay

Colloquia and Talks

Dr G K Rao Post-doctoral Scholar, Department of Chemistry, University of Ottawa, Canada, 'Base Metal Complexes of Neutral 'PN3P' Pincer Ligand for Clean Energy Application', October 27, 2017

Prof Rabah Boukherroub, Institut d'Electronique, de Microélectronique et de Nanotechnologie, Université de Lille, France, 'Carbon-based Nanocomposites for Energy, Environmental and Biomedical Applications', November 6, 2017

Dr Abhishek D Chowdhury, Marie Sklodowska-Curie Fellow, Utrecht University, The Netherlands, 'Inorganic Chemistry and Catalysis: From Industrial Application to Operando Spectroscopy', November 10, 2017

Dr Anna Maria Venezia, Director of Research, CNR-ISMN, Palermo, Italy, 'Support effect in CH₄ Partial Oxidation over Ni-Base Catalysts', November 24, 2017

Prof Rajamani Krishna, Van't Hoff Institute for Molecular Sciences, University of Amsterdam, The Netherlands (Former Director, CSIR-IIP, Dehradun), 'Potential of microporous crystalline adsorbents for mixture separations in the process industries', December 11, 2017

Dr Somenath Shinde, Department of Chemical and Biomolecular Engineering, University of Tennessee, Knoxville, USA, 'Insight into alkaline deconstruction of genetically modified Zip-poplar by AFEXTM and EA pretreatment processes', December 15, 2017

DISTINGUISHED VISITORS

Dr Jhuma Sadhukhan, Associate Professor, University of Surrey, UK; Dr Adriano Sciacovelli, Lecturer, University of Birmingham, UK; Ms Rashmi Patil, Research Scientist, Anaero technology, UK; Yatin Behl, Chemical Process Engineer, Green Biologics, UK; Prof Richard Murphy, Director, CES, University of Surrey, UK; Dr Mayri Díaz De Rienzo, Research Associate, Liverpool John Moores University, UK; Dr Mobolaji Babatunde Shemfe, University of Surrey, UK; Dr Morteza Khorami, Lecturer, Coventry University, UK; Dr Julian Steer, Research Fellow, Cardiff University, UK; Dr Vinod Kumar, Lecturer, Cranfield University, UK; Dr Enass Abo-Hamed, Imperial College, UK;

Dr Tosin (Onabanjo) Somorin, Research Fellow, Cranfield University, UK; Dr Matthew Pearce, Phycofeeds Limited, UK; Maria Lorena Romina Falco, Post-doctoral Fellow, Aston University, UK; Dr Siddharth Gadkari, University of Surrey, UK; Dr Anne P M Velenturf, Co-ordinator, University of Leeds, UK; Dr Alejandro Gallego Schmid, Research Associate, University of Manchester, UK; Prof Al-Hussaini HA, University of Surrey, UK; Dr N Lingaiah, Principal Scientist, CSIR-IICT, Hyderabad; Dr Raja Chowdhury, Asst. Professor, IIT-Roorkee; Dr S Venkata Mohan, Principal Scientist, CSIR-IICT, Hyderabad; Dr Rajeev Kumar Sukumaran, CSIR-NIIST, Thiruvananthapuram; Dr Pratham Arora, Associate Fellow, The Energy and Resources Institute (TERI)-IHC, New Delhi; Dr Sabeela Beevi Ummalyma, Post-Doctoral Fellow, Institute of Bioresources and Sustainable Development (IBSD), Imphal and Dr Parthasarathi Ramakrishnan, CSIR-IITR, Lucknow; to attend the Newton Bhabha Researcher Links Workshop on 'Energy for Economic Development and Welfare', October 23-27, 2017

Capt. Gurcharan Arora, Asst. Vice-President, Flight Operations, Capt. Mahender Singh, Deputy Chief Pilot-Technical and Special Projects and Mr Akshaya Gawarikar, Deputy General Manager-Project Management, SpiceJet Ltd., Gurgaon, October 27, 2017

Prof Rabah Boukherroub, Univerisite' de Lille, France, under the INSA-DS Kothari Chair Award, November 5-9, 2017

Dr Alemu Sime, State Minister, Addis Ababa, Ethiopia, Mr Samuel Halala, General Director of Chemical and Construction Inputs Industry Development Institute (CCIIDI), Addis Ababa, Ethiopia; Mr Hadushom Tuem, Deputy General Director of CCIIDI; Ms Sefora Hailu, Steering Committee, Addis Ababa, Ethiopia; Mr Tesfaye Birhanu, Steering Committee Member at CCIIDI; Dr Tetemke Mehari, Steering Committee Member at CCIIDI and Mr Muhiye Endrie, Testing and Research Directorate Director, Addis Ababa, Ethiopia; November 10, 2017

Mr Surender Pratap, Director & HOD {R&D/Technical (S&L)}, and Mr M P Bangwal, Additional Director (R&D), PCRA, New Delhi, November 17, 2017

Dr Sanjeeva Singh, Lead Auditor, DNV, GL, New Delhi, November 17, 2017

Mr Madan Mohan Varshney, Senior Vice-President, Flex Food Limited, Dehradun, December 18, 2017

Mr Vinay Kumar Ruhil, Executive Engineer and Mr Ravi Kapoor, Executive Engineer, Rajiv Gandhi Thermal Power Project (RGTPP), Khedar, Hisar, December 19, 2017

INTERNATIONAL VISITS

Dr Debashish Ghosh, Scientist, visited the University College, London (UCL), UK to attend a strategic meeting on discussion of projects for POC Diagnostics and antimicrobial resistance and also to attend a workshop on "POC Diagnostics", October 10-17, 2017

Dr Anjan Ray, Director, participated in the '2017

Taiwan-India Industrial Collaboration Summit' (including Taitronics, the Taipei International Electronics Show) and the CSIR-ITRI Strategic Partnership Meeting including a joint seminar, visit to lab facilities and incubation centres etc., Taiwan, October 12-14, 2017

Ms Jayati Trivedi, Scientist, visited the German Research institutes and companies at Germany as an Awardee of the Green Talents -2017 Awards of the German Federal Ministry of Education and Research, October 14-28, 2017

Dr Suman L Jain, Senior Scientist, visited the Bar Ilan Institute for Nanotechnology and Advanced materials (BINA), Bar Ilan University, Israel as a visiting scientist under the 'INSA-Israel Bilateral Exchange of Scientists' programme, October 15-21, 2017

Mrs Poonam Gupta, Senior Principal Scientist & Dr S K Maity, Principal Scientist, visited M/S Zeton Inc Burlington, Ontario, Canada for factory acceptance test of the pilot plant ordered by CSIR-IIP, October 30 - November 3, 2017

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

Participation by Dr Anjan Ray, Director

Besides visiting the CSIR Headquarters to discharge his additional duties as Head of the RPPBD (Research, Project Planning and Business Development) Directorate there on various occasions, Dr Anjan Ray participated in a number of discussions, meetings, etc. some of which are detailed below:

'Research Council Meeting' of the CSIR-CSMCRI, Bhavnagar, October 5, 2017

A meeting at the Kochi Refinery, BPCL, Kochi, October 7, 2017

Visited the Synthite Valley Spice Plantations for exploring the opportunities on biomass from spice residues (Kochi), October 8, 2017

'Mission Innovation Workshop on Sustainable Biofuels' to give an overview on Renewable fuel alternatives for diesel at ICGEB, New Delhi, October 9, 2017

Chaired the '11th Task Force Meeting on Energy Biosciences' at the Department of Biotechnology, New Delhi, October 10, 2017

A meeting of the Review Committee constituted to carry out the Outcome Review of the 12th Plan Scheme of CEL and NRDC supported by DSIR, New Delhi, October 16, 2017 and October 30, 2017

The Executive Committee Meeting of the Centre for High Technology (CHT), Scope Convention Centre, Scope Complex, New Delhi, October 30, 2017

A meeting with the OMC regarding the recommendations arising out of the field study established by the CSIR-IIP for benzene emissions at petrol stations in India and solutions for its abatement, New Delhi, October 31, 2017

The 'Axens India Seminar-2017', New Delhi, December 7, 2017

Participation by the other S&T Staff

Dr Anshu Nanoti, Senior Principal Scientist, Dr Bipul Sarkar, Scientist and Mr Indrajit Ghosh, Scientist, 'Lovraj Kumar Memorial Trust Annual Workshop-2017: Petrochemicals: Beyond Bulk Products', New Delhi, October 13-14, 2017

Mr S K Ganguly, Senior Principal Scientist, 'Advance Course in Surface Sciences', Orbit Research & Consultancy, New Delhi, October 30 - November 2, 2017

Dr Ajay Gupta, Principal Technical Officer and Dr Srinivas Padala, Senior Scientist, '10th International Conference on Enabling Cleaner and Greener India: Progressing Towards BS VI Norms (ECT 2017)', New Delhi, November 2-3, 2017

Mr Avinash Suryakant Mhetre, Scientist, GIAN course 'Complexity in Chemical Kinetics: Experimental and Modelling Approaches', IIT-Bombay, Mumbai, November 20 - December 1, 2017

Dr Raj Kumar Singh, Scientist, Dr Ajay Gupta, Principal Technical Officer, Mr M K Shukla, Senior Scientist, Mr Sudhakar Reddy, Scientist, Mr Indrajit Ghosh, Scientist, Mr Kalyan Singh, Principal Technical Officer, 'One-day Workshop on Moving Towards High-Octane Requirements in India - Beyond 2020', New Delhi November 21, 2017

Dr G D Thakre, Senior Scientist, Mr Pankaj K Arya, Scientist, Mr Pranab Das, Scientist and Ms Neha Sharma, '9th International Conference on Industrial Tribology', Kolkata, December 6-9, 2017

Mr Amar K Jain, Chief Scientist, Dr S S Ray, Senior Principal Scientist, Dr S K Ganguly, Senior Principal Scientist, Dr N Viswanadham, Senior Principal Scientist, Dr Manoj Srivastava, Principal Scientist, Dr Thallada Bhaskar, Principal Scientist, Dr A K Sinha, Principal Scientist, Dr Suman L Jain, Senior Scientist and Dr B R Nautiyal, Principal Technical Officer, 'Axens India Seminar-2017', New Delhi, December 7, 2017

Mr Vishwas Saini, Technical Assistant, 'XIX International Workshop on The Physics of Semiconductor Devices (IWPSD) 2017', December 11-15, 2017

Mrs Poonam Gupta, Senior Principal Scientist and Mr L Robindro, Principal Scientist, '2017 International Transportation Electrification Conference India (ITEC-India)', Pune, December 13-15, 2017

IMPORTANT MEETINGS

The 44th Research Council (RC) Meeting, October 3, 2017

The 44th Meeting of the Research Council of the CSIR-IIP was held on October 3, 2017 at the Institute. Some members of the newly-constituted body (tenure: August 16, 2017 – August 15, 2020) consisting of 12 members, i.e., the Chairman Dr R K Malhotra, Director-General, Federation of Indian Petroleum Industry (FIPI), New Delhi; Dr B Bhargava, Director-General, ONGC Energy Centre, Delhi; Mr Arjun Arora, Independent Director, Tata Petrodyne Limited, Mumbai; Dr Paul Ratnasamy, Former Director, CSIR-National Chemical Laboratory, Pune; Dr Pradeep Kumar Singh, Director, CSIR-Central Institute of Mining and Fuel



The 44th RC Meeting in progress

Research, Dhanbad; Dr Raksh Vir Jasra, Senior Vice-President (R&D), Reliance Industries Limited, Vadodara; Dr D Srinivas, Chief Scientist, CSIR-National Chemical Laboratory, Pune and Dr Anjan Ray, Director, CSIR-IIP attended the meeting in person while Dr S Chandrasekhar, Director, CSIR-Indian Institute of Chemical Technology, Hyderabad joined the proceedings through video-conferencing. Prof K K Pant, Petrotech Chair Professor, Department of Chemical Engineering, IIT-Delhi, Delhi; Dr Ajay Mathur, Director-General, TERI, New Delhi and Dr Atanu Chakraborty, Director-General of Hydrocarbons, NOIDA were not present on the occasion. The proceedings were conducted by Mr A K Jain, Chief Scientist and Secretary, Research Council, CSIR-IIP.



R C members along with the Institute veterans

28th CSIR-IIP Management Council (MC) Meeting, October 24, 2017

The 28th Meeting of the Management Council of the CSIR-IIP was held at the Institute on October 24, 2017 under the Chairmanship of Dr Anjan Ray, Director, CSIR-IIP. The other members present were Dr Sanjay Kumar, Director, CSIR-Institute of Himalayan Bioresource Technology (IHBT), Palampur (External Member); Mr A K Jain, Chief Scientist; Mr Poonam Gupta, Senior Principal Scientist; Mr Devender Singh, Senior Scientist; Mr Saleem Akhtar Farooqui, Scientist; Mr A C Gairola, Finance & Accounts Officer besides Mr Jaswant Rai, CoA as the Secretary.

Project Review Meeting on the Development of Open-Loop Iodine-Sulphur Process: OEC & CSIR-IIP, Dehradun Collaborative Projects, December 12, 2017

A Review Meeting on the status of some important ongoing IIP-OEC collaborative projects on Open-loop I-S Cycle Development was held on December 12, 2017 on the Institute premises.

The meeting was chaired by Dr Anil Kakodkar, Former Chairman,



Project Review Meeting in progress. Dr Kakodkar is seen at far right

Atomic Energy commission and Trustee, OEC. Dr Sreedevi Upadhyayula, Dept of Chemical Engineering, IIT-Delhi, was present as an External Member. Others present from OEC, Delhi were Dr Bharat Bhargava, Director-General; Mr Puneet Kishore, Head, Dr D Parvatalu, Domain Expert and Ms Chitralee Goswami, Head-Finance. Dr Anjan Ray, Director; Dr Anshu Nanoti, Sr Principal Scientist; Mr A K Jain, Chief Scientist; Dr Subham Paul, Scientist, PI, Project 1; Dr Sunil Kumar, Sr Scientist, Co-PI, Project



Dr Anil Kakodkar visits a laboratory with Dr Anjan Ray & Dr Bhargava

2; Dr Ankur Bordoloi, Scientist, Co-PI, Project 1; Mr Prasenjit Ghosh, Scientist, Team Member; Mr Pankaj K Arya, Scientist, Team Member; Dr Ankush Bindwal, Scientist, Team Member; Mr Avinash S Mhetre, Scientist, Team Member; Mr Pradeep Kumar, Technical Assistant, Team Member and Mr A Gairola, F&A Officer participated from the Institute's side.

HRD/AWARENESS EVENTS

Programmes at the CSIR-HRDC, Ghaziabad

Dr Y Sudhakar Reddy, Scientist; Mr Kamal Kumar Maurya, Technical Officer and Pradeep Kumar, Technical Assistant, *'Workshop on Crafting Effective S&T Communication'*, October 11-13, 2017

Mr Akhilesh K Kurmi, Technical Assistant; Ms Jyoti Porwal, Technical Assistant, Mr Piyush Gupta, Technical Assistant and Mr Om Prakash Sharma, Technical Officer, *'Three-day Training Programme on Managerial Effectiveness for Technical Officers'*, October 26-28, 2017

Dr Neeraj Atray, Principal Scientist and Dr Rajaram Bal, Senior Scientist, *'Workshop on Technology Commercialization and Transfer'*, November 1-3, 2017

Mr M K Gairola, Section Officer (F&A); Mrs Vineeta Walia, Mr Pankaj Kumar Maurya, Mr S P Saklani, Mr Mahesh Kumar, Assistant Section Officers; Mr Rakesh Pant, Mr Harjeet Singh, Mr Himmat Singh, Senior Secretarial Assistants; Mr Bijender

Dutt, Junior Secretarial Assistant (S&P) and Mr N K Rawat, Senior Technician, *'Training Programme on Implementation of New Accounts Software in CSIR Labs/Institutes'*, November 27 to December 1, 2017

Dr Kishore Natte, Senior Scientist and Mr Satish Kumar, Senior Technical Officer, *'Training Programme on Creativity & Innovation for Rural Societies for Scientists and Technical Officers'*, December 4-6, 2017

Mr Jaswant Rai, Controller of Administration, *'Training Programme on Vigilance and Related Matters'*, December 13-15, 2017

Other Programmes

Dr Ajay Kumar, Senior Scientist, *'Training Programme on Emotional Intelligence at Workplace for Scientists/Technologists'* at the Centre for Organization Development, Hyderabad, December 11-15, 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 51 3rd-semester students of M Sc-Microbiology Department, A N Patel PG Institute of Science and Research, Anand, Gujarat, along with 3 faculty members, October 5, 2017

A team of 125 Class IX students, M P Council of Science & Technology, Madhya Pradesh along with 11 faculty members and 4 officers, under the *'Vigyan Manthan Yatra-2017'*, October 10, 2017



Students vis-à-vis the ground-level research

A team of 17 Classes XI & XII students, Indian Railways Oak Grove School, Jharipani, Mussoorie along with 1 faculty member, October 23, 2017

A team of 60 students of MSc (Chemistry), MSc (Pharmaceutical Chemistry) and BSc (PCM & CBZ), Sardar Bhagwan Singh PG Institute of Bio-medical Sciences & Research, Balawala, Dehradun along with 2 faculty members, November 9, 2017

A team (Group 1) of 49 students of Class IX, Unison World School, Mussoorie Diversion Road, Dehradun, along with 5 faculty members, November 16, 2017



Students of the Unison World School, Mussoorie visiting a laboratory

A team (Group 2) of 39 students of Class IX, Unison World School, Mussoorie Diversion Road, Dehradun, along with 4 faculty members, November 28, 2017

DNV AUDIT ISO 9001:2008

The 4th periodic audit of the Institute by the DNV, New Delhi was conducted under the auditorship of Dr Sanjeeva Singh, Lead Auditor, November 17, 2017.

HONOURS & AWARDS

Dr Suman Lata Jain, Senior Scientist, has become an Associate Editor on the Editorial Board of the '*New Journal of Chemistry (NJC)*'. NJC is a high-impact chemistry journal which is owned by Le Centre national de la recherche scientifique (CNRS) of France and is co-published by the Royal Society of Chemistry. The journal publishes high-quality, original and significant work that opens new directions in chemistry. Owing to her expertise in green/sustainability chemistry as well as in materials science, Dr Jain was chosen for this honour.

Ms Jayati Trivedi, Scientist, was chosen for the '*Green Talents-2017 - International Forum for High Potentials in Sustainable Development Award*' by the German Federal Ministry of Education and Research (BMBF) in Berlin, Germany on October 27, 2017. She was one of the 25 young researchers coming from 21 different countries. The award was given during a two-week science forum tour to the leading universities and companies in Germany working in the area of sustainable production and consumption.



Mr Jayati Trivedi receives the Green Talents -2017 Award

Mr M K Shukla, Senior Scientist, was honoured at the '*Young Scientist in Automotive Fuels and Lubricants for the VIRA-2017 Research Awards*'. The award (a Certificate with a Bronze Medal) was awarded to Mr Shukla during the '*3rd Annual Research Meet (ARM) of the APEX Committee*' at Chennai on November 11, 2017.

Congratulations!

PhD/D Phil DEGREE AWARDS

Mr Ravindra Prajapati was awarded PhD degree for his thesis entitled '*Development of Slurry-Phase Catalysts for Residue Upgradation*' done under the supervision of Dr S K Maity by the Academy of Scientific & Innovative Research (AcSIR), December 1, 2017.

Congratulations!

PARTICIPATION OF THE INSTITUTE IN THE MEGA EXPO IISF-2017 (OCTOBER 13-16, 2017), CHENNAI

Dr D C Pandey, Principal Technical Officer; Mr Kalyan Singh, Senior Technical Officer; Mr Manoj Kumar Thapliyal, Senior Technical Officer; Mr Sundram Sharma, Technical Officer; Mr Deependra Kumar Tripathi, Technical Assistant; Mr Vikram Singh Rawat, Assistant Section Officer; Mr Rajender Kumar, Technician and Mr Aman Bhonsle, JRF, participated in the Mega Expo IISF-2017 to showcase the exhibits of the CSIR-IIP. The event was held at various places in Chennai (Tamil Nadu), viz., the Anna University, the CSIR-Central Leather Research Institute (CLRI), the CSIR-Structural Engineering Research Centre (SERC), the National Institute of Ocean Technology (NIOT) and the IIT-Madras.



The CSIR-IIP stall at the Mega Expo IISF-2017

'SWACHCH BHARAT ABHIYAN'

The cleanliness initiative of the Govt of India christened '*SWACHCH BHARAT ABHIYAN*' was organized in the Institute campus on October 2, 2017, being the birthday of Mahatma Gandhi. Several employees joined in a cleaning drive on the CSIR-IIP premises with Dr Anjan Ray, Director in the lead.



Dr Anjan Ray leading the cleanliness drive

VIGILANCE AWARENESS WEEK (OCTOBER 30-NOVEMBER 4, 2017)

Vigilance Awareness Week (October 30-November 4, 2017) was initiated in the Institute as per GOI instructions. The followings events were held to mark the Week.

- ❖ Administration of an oath on the employees by Mr A K Jain, Acting Director, on October 30, 2017.
- ❖ A lecture on Cyber Crime by Mr V P Thapliyal, SI, Cyber Crime Police Station (STF), Uttarakhand Police, Dehradun, on October 31, 2017.
- ❖ A lecture by Mr Mukesh Gairola, Section Officer (F&A) on the TA/DA rules in the light of the 7th Central Pay Commission as also their applicability on LTC (Leave Travel Concession) claims, November 1, 2017.



Employees' assemblage at the vigilance pledge ceremony

RASHTRIYA EKTA DIWAS, OCTOBER 31, 2017

As per GOI instructions, Rashtriya Ekta Diwas (National Unity Day) pledge was taken by the employees of the Institute on October 31, 2017 on the occasion of the birthday of Sardar Vallabhbhai Patel. The oath was administered by Mr A K Jain, Acting Director, on October 31, 2017.

OATH FOR THE CONSTITUTION DAY (NOVEMBER 26) ON NOVEMBER 24, 2017

The anniversary of the adoption of the Constitution of India by the Constituent Assembly on November 26, 1949 was observed on Friday, the 24th November, 2017 at the Institute in which the Preamble of the Constitution of India was read out by the Director, Dr Anjan Ray, with the employees following, re-asserting the adoption and dedication enshrined therein.

HEALTH CAMPS

A free health camp on Bone Mineral Density was organized in the CSIR-IIP Health & Family Welfare Centre, under the aegis of the CSIR-IIP Medical & Health Centre, December 8, 2017

JOINT WORKSHOP WITH WAC, DEHRADUN

A Joint workshop with the Waste Action Collective (WAC), Dehradun on 'Awareness of Domestic Waste Management and Segregation' was held in the CSIR-IIP Community Centre on November 26, 2017.

राजभाषा-संबंधी गतिविधियां

- 'नाभिकीय ऊर्जा' पर हिंदी वैज्ञानिक कार्यशाला, 27 दिसंबर, 2017
दिनांक 27 दिसंबर, 2017 को राजभाषा अनुभाग द्वारा अक्टूबर-दिसंबर, 2017 की तिमाही हेतु संस्थान में 'नाभिकीय ऊर्जा' पर हिंदी वैज्ञानिक कार्यशाला का आयोजन किया गया, जिसका विषय था:
'नाभिकीय ऊर्जा के मूलभूत तत्वों तथा नाभिकीय विद्युत केंद्रों के प्रचालन एवं अनुरक्षण-संबंधी पहलुओं पर एक वार्ता'।
इस कार्यशाला के मुख्य वक्ता थे, परमाणु ऊर्जा विभाग, भारत सरकार के अधीनस्थ 'न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया' द्वारा संचालित नाभिकीय

विद्युत केंद्रों में से एक 'नरोरा परमाणु विद्युत केंद्र' से 'प्रशिक्षण अधीक्षक' के पद से सेवानिवृत्त श्री रमेश चंद्र। प्रथमतः श्री रमेश चंद्र का स्वागत पुष्प-गुच्छ देकर प्रशासन नियंत्रक श्री जसवंत राय ने किया। इसके बाद विषयारंभ और कार्यक्रम का संचालन करते हुए श्री एम सी रतूड़ी, वरिष्ठ हिंदी अधिकारी ने श्री रमेश चंद्र का परिचय दिया। श्री रमेश चंद्र ने अपने वक्तव्य में बताया कि भारत में परमाणु ऊर्जा पर वर्ष 1956 से कार्य प्रारंभ हुआ। साथ ही उन्होंने इस कार्य की पृष्ठभूमि पर भी प्रकाश डाला। श्री रमेश चंद्र ने अपनी पावर पॉइंट प्रस्तुति के माध्यम से विषय की बारीकियां स्पष्ट कीं, जिनमें भारतीय नाभिकीय विद्युत कार्यक्रम की वर्तमान स्थिति, नाभिकीय ईंधन के चक्र, नाभिकीय रासायनिक अभिक्रिया आदि विषय सम्मिलित थे। मुख्य अतिथि ने जल-विद्युत, नाभिकीय विद्युत तथा कोयले से उत्पन्न की जाने वाली विद्युत के संयंत्रों, रख-रखाव, लागत-लाभ विश्लेषण, सामाजिक व अन्य पहलुओं की तुलना करते हुए नाभिकीय ऊर्जा को सर्वश्रेष्ठ बताया। मुख्य अतिथि ने सुरक्षा प्रणालियों, विद्युत केंद्रों से संबंधित प्रशिक्षण, अनुज्ञापन, संयंत्र की रचना, विकिरण संबंधी पहलुओं आदि पर भी प्रकाश डाला। कार्यक्रम की अध्यक्षता करते हुए कार्यकारी निदेशक श्री अमर कुमार जैन ने प्रस्तुति को मूल रूप से पेट्रोलियम के क्षेत्र में काम करने वाले हमारे संस्थान के लिए एक नया और ज्ञानवर्द्धक क्षेत्र बताया और कहा कि इस प्रस्तुति से हमें कई नई सूचनाएं प्राप्त हुई हैं।

संस्थान-परिवार के समाचार

(क) पदोन्नतियाँ

वरिष्ठ तकनीकी अधिकारी से प्रधान तकनीकी अधिकारी

- श्री आर सी सकसेना 14.05.2013
- श्री सर्वजीत सिंह 18.05.2013
- श्री महिपाल (सेवानिवृत्त) 12.08.2013
- श्री हाकिम सिंह (सेवानिवृत्त) 21.01.2014
- श्री के के सिंह (सेवानिवृत्त) 01.04.2014
- श्री जी एम बहुगुणा 14.05.2014
- श्री सियाराम (सेवानिवृत्त) 22.06.2014
- श्री योगराज (सेवानिवृत्त) 19.07.2014
- श्रीमती पुष्पा गुप्ता 22.08.2014
- श्री गिरेन्द्र सिंह 19.09.2014

वरिष्ठ तकनीकी अधिकारी (2) से वरिष्ठ तकनीकी अधिकारी (3)

- श्री एस उपाध्याय (सेवानिवृत्त) 01.04.2011
- श्री योगराज सिंह 26.09.2013
- श्री कल्याण सिंह 20.09.2014

वरिष्ठ तकनीकी अधिकारी (1) से वरिष्ठ तकनीकी अधिकारी (2)

- श्री संदीप सरन 27.04.2014
- श्री जगदीश कुमार 04.05.2014
- श्री सतीश कुमार 05.05.2014
- श्री मनोज कुमार 23.05.2014

तकनीकी अधिकारी से वरिष्ठ तकनीकी अधिकारी (1)

- श्री राजेन्द्र बडोला 23.10.2013
- श्री सत्य निकेतन यादव 26.11.2013

बधाइयाँ!

(ख) संस्थान-परिवार से विदाई

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

31 दिसंबर, 2017

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