



# संकल्प

## Newsletter

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### CSIR - IIP

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CSIR - INDIAN INSTITUTE OF PETROLEUM, Dehradun

### A word from the Director...



September 26, 2017, brought a year of celebrations commemorating the Platinum Jubilee of the foundation of CSIR to a close. In a ceremony graced by the Hon'ble President of India Shri Ram Nath Kovind at Vigyan Bhavan, New Delhi, CSIR laboratories including CSIR-IIP showcased technological

innovations leading to key societally, industrially and strategically important interventions. Addressing the gathering of scientists from across the country, the President appealed to all to strike a balance between the excitement of technology and "fundamentally important" research.

Noting that the country's ambitious national programmes - such as Start-up India, Make in India, Digital India, Swachh Bharat, NamamiGange and the Smart Cities Mission - cannot be successful without scientists and technology incubators, President Kovind said, "The true test of scientific research lies in its ability to help our society leapfrog social sector gaps [...and] make us a middle-income country in one human lifetime".

A number of events and functions were organized at the CSIR-IIP campus during the quarter. The Open Day function was held on the eve of the CSIR Foundation Day Platinum Jubilee celebrations at the Institute. In August, the CSIR Technofest Exhibition opened to a very satisfying level of participation by the Institute employees, ex-employees, students of local educational institutions and interested members of the general public. World Biofuels Day was observed in August as well, and a Cancer and anti-Tobacco awareness programme was hosted.

Continuing with CSIR-IIP's participation in education-linked outreach programmes, a Memorandum of Understanding was signed this quarter with the Uttaranchal University for academic and research cooperation. Earlier, on 6 July, 2017, 'Jigyasa', a student-scientist connect programme was officially launched in the national capital by Hon'ble Union Ministers Dr Harsh Vardhan and Mr Prakash Javadekar. CSIR has joined hands with the Kendriya Vidyalaya Sangathan (KVS) to implement this programme, wherein the focus is on connecting school

students and scientists so as to extend student's classroom learning with that of a very well-planned research laboratory-based learning. This enhances opportunities for young scientists at the CSIR-IIP to mentor, and stimulate interest in science in, the KV students in the Dehradun area, including the KV-IIP located on our campus.

In addition to the Fast-Track Translation (FTT) Projects in areas of Bio-gas quality up-gradation, Adsorptive desulphurization of diesel, Conversion of waste plastics to fuels and Production of bio-jet fuel from non-edible oils that constitute the spearhead of the Institute's large-scale commercialization efforts, several new sponsored projects were signed during the months under review. Notable among these are "Feasibility studies on compatibility of graphene-based additives with fully formulated engine oils of M/s Gulf Oil" and "Catalytic cracking of cresol dimers into its monomers at bench-scale level over equilibrium fluid catalytic cracking catalyst." Both these projects break new grounds in extending proof of concept work done earlier at the CSIR-IIP towards industrial applications of value.

To encourage our talented team of researchers to explore new ideas with breakthrough implications, a number of new in-house projects have also been taken up. In particular, the Eco-Campus Initiative, intended to demonstrate a model community for sustainable living that could be replicated on a national scale, took shape and it promises to gather momentum in the coming months.

Sustainability, safety, security are all essential elements of excellence in science. As scientists working with chemicals that may be toxic, carcinogenic, flammable or explosive, we carry a great responsibility to the society at large and our own near and dear ones to act prudently and competently in the delivery of our mandate. Team CSIR-IIP renews its pledge to be a flagship of translational research in the fuels and energy sector within India and beyond.

I dedicate this latest edition of the CSIR-IIP Newsletter to a world we are working towards, where energy is abundant, affordable and appropriate to the needs of living beings and our planet.

Warm regards and best wishes.

Anjan  
(Dr Anjan Ray)

### CSIR PLATINUM JUBILEE CELEBRATIONS, SEPTEMBER 26, 2017

CSIR-Indian Institute of Petroleum, one of the premier institutes of CSIR, situated at Dehradun, celebrated the CSIR Platinum Jubilee Celebration on September 26, 2017. The main function was held at Dr Lovraj Kumar Auditorium of the Institute. Dr S J Chopra, Chancellor, University of Petroleum and Energy Studies (UPES), Dehradun was the Chief Guest of the function.

Dr D C Pandey, Chairman, Celebration Committee, spoke on the importance of the day and said that CSIR, conceived years before, was finally established on September 26, 1942, with Sir Shanti



Dr S J Chopra kickstarting the celebrations with the lighting of the lamp

Swaroop Bhatnagar as its first Director-General. He recollected the various activities under the Platinum Jubilee celebrations of the CSIR which began one year ago, notable among them being the India International Science Festival and the TechnoFest 2016. He mentioned that at that very same time the Platinum Jubilee celebrations of the CSIR was being held at Vigyan Bhawan, New Delhi, where the Honourable President of India was the Chief Guest, and the Prime Minister Mr Narendra Modi, President of the CSIR was also present, among other dignitaries. He stressed upon the vision of Mr Narendra Modi, which holds the welfare of the general public at the centre of all scientific research.

Mr Amar Kumar Jain, Chief Scientist, as Acting Director, CSIR-IIP, welcomed the Chief Guest and introduced him to the audience, detailing his various attainments. He acknowledged the contribution of the ex-scientists of the Institute, which is the basis of the Institute's achievements today. He mentioned some critical technological accomplishments of the Institute as well.



*Dr Chopra delivers his inaugural address*

The Chief Guest, Dr S J Chopra, Chancellor, University of Petroleum and Energy Studies (UPES), Dehradun, who had also planted a tree in the CSIR-IIP premises earlier, congratulated all on the occasion and acknowledged the role of the CSIR-IIP in his professional career. He talked about the vision and mission of CSIR and underlined the need to change as the times are changing very fast and as one has to re-skill himself many times to remain relevant. He also touched upon the need for

deeper interaction between R&D institutions, industry and the academia. The Chief Guest emphasized on seamless connectivity between science and technology, trans-disciplinary leadership, and the need to create a dynamic environment in which inter-laboratory exchange and connectivity is a must. He talked about the world slowly migrating from fossil fuel-driven vehicles to electric vehicles and renewable energy, and, thus, the petrochemical sector most possibly becoming redundant. Dr Chopra also mentioned some salient features essential for a healthy organization and told all about the UPES. He also stressed upon industry-academia interaction. "Either we should change or perish," he said.

The employees who had retired in the immediate preceding year were honoured by the Chief Guest with a shawl, *Samman Patra*, and a memento while the services of the employees completing 25 years of service were recognized by way of presenting mementoes to them. This part of the programme was conducted by Mr Parvesh Chand, Section Officer. The Chief Guest also distributed prizes to the winners of the Elocution and Quiz Competitions organized for the students of Kendriya Vidyalaya and the CSIR-IIP employees respectively on the occasion of the CSIR Platinum Jubilee.

Mr Jaswant Rai, Controller of Administration, proposed a vote of thanks. Mr M C Ratori, Sr. Hindi Officer, CSIR-IIP compered the whole function. The programme was followed by a sumptuous lunch for the entire CSIR-IIP family, which included regular employees besides research students, project community, contractual staff, etc. The afternoon was witness to a cultural programme to celebrate the day.



*A glimpse of the cultural show*

### **'OPEN DAY' CELEBRATED ON THE EVE OF CSIR PLATINUM JUBILEE CELEBRATIONS, SEPTEMBER 25, 2017**

The **Council of Scientific and Industrial Research** (वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद - CSIR), established by the Government of India in 1942 with a vast nation-wide network of R&D laboratories working on disciplines ranging from radio and space physics, oceanography, geophysics, chemicals, drugs, genomics, biotechnology and nano-technology to mining, aeronautics,



*Prof P K Garg inaugurates the day's proceedings*

instrumentation, environmental engineering and information technology, celebrates its Platinum Jubilee this year. The celebrations at the CSIR-IIP, its constituent laboratory, began with an 'Open Day' on September 25, 2017.

The programme, conducted by Mr Deependra Kumar Pandey, began with a rendition of Saraswati Vandana by the girl students of the GGIC, Lakhi Bag, Dehradun.

At the outset, Dr Anjan Ray, Director, CSIR-IIP welcomed the guests and briefed the audience about the journey of CSIR, recounting some of its significant researches. He talked on a range of topics from baby food to pollution to export of wax and possibilities of better fuel, and CSIR's role in it. He said that it is through science that social welfare is reached. He also praised the



*Dr Anjan Ray*

Vijnana Bharati organization, which searches out and chaperones the budding scientists.

Mr Prajatantra Gangele of 'VIBHA' talked about the Vijnana Bharati (VIBHA), Uttarakhand, and its contributions and efforts. He recalled India's ancient scientific heritage, mentioning mathematicians like Aryabhata among others, and the Vedic Mathematics. Mr Gangele emphasized that the

development of a country can be attained with a two-pronged approach: having a strong foothold in our culture while aspiring to evolve according to the demands of the current times. A popular talk on 'Safety at Petrol Pumps & Future Developments' was given by Mr K Raghuvanshi, Territory Co-ordinator, BPCL, Uttarakhand.



*Dr P K Garg speaks*

Mr A K Jain, Chief Scientist, briefly introduced the Chief Guest Prof P K Garg, Vice-Chancellor, Uttarakhand Technical University, Dehradun. Professor Garg gave a lecture on waste management, one of the major issues before the country today. The function was attended by a large number of students from various local schools including different branches of Kendriya Vidyalaya, St. Kabeer Academy,

Miyanwala, Govt. Girls' Intermediate College, Lakhi Bag, among others, besides the members of the CSIR-IIP family. The programme concluded with a vote of thanks by Mr Jaswant Rai, Controller of Administration.

As an important part of the Day, the laboratories of the CSIR-IIP were open between 10:00 a.m. to 03:00 p.m. for the students of local educational institutions and the general public as well,



*School students vis-à-vis practical science in one of the laboratories of the Institute*

providing an opportunity for all not only to have an exposure to the R&D work, see the exhibits of the processes and products developed here, but also to interact with the scientists of the Institute.

**CELEBRATION OF WORLD BIOFUEL DAY, AUGUST 10, 2017**

World Bio-fuel Day was celebrated in the CSIR-Indian Institute of Petroleum, Dehradun, as per directions of the Hon'ble Minister of State for Petroleum & Natural Gas, Mr Dharmendra Pradhan, in tandem with a total of 100 cities of the country. The programme aims at creating a secure, sustainable and environment-friendly economy. The theme chosen at the CSIR-IIP for this year was '**Education and Action Today for Safe Future**'.

The concept of World Bio-fuel Day on 10<sup>th</sup> August every year has its origins in the fact that it was on this day in 1873 that Sir Rudolph



*Prof K P Singh inaugurates the World Biofuel Day*

Diesel, the inventor of the diesel engine, ran a mechanical engine with peanut oil successfully for the very first time. His research experiment had predicted that vegetable oil would replace fossil fuels by the next century to fuel different mechanical engines. World Bio-fuel Day marks this extraordinary achievement.

The celebrations started with the arrival of the Chief Guest, Prof K P Singh, Vice-Chancellor, Haryana Agricultural University, Vice-Chancellor, Haryana State University of Horticulture (Additional Charge) and Ex-Director, Uttarakhand Council of Biotechnology (UCB), and the lighting of the traditional lamp by him, along with other dignitaries on the dais.

The Acting Director, Mr Amar Kumar Jain, initiated the proceedings with a word on the importance of the World Bio-fuel Day. He talked about the background of the World Bio-fuel Day and informed the audience that Research & Development is going on how to use vegetable oil as a transport fuel by converting it to bio-diesel. It was the fuel-versus-food debate that led to the conversion of biomass and waste plastics to fuel. Mr. Jain also referred to the various programmes held on the use of biofuel during the preceding years.

Dr S S Ray, Chief Scientist, introduced the Chief Guest, followed by the address of the Chief Guest.

Prof K P Singh said that for about a hundred years we have been ruled by science but for the next fifty years, life sciences will rule



**Prof K P Singh speaks**

the world. Professor Singh talked about the discovery of the double helix structure of DNA by Francis Crick and James D. Watson using X-ray diffraction and the mathematics of a helix transform. Professor Singh said that we have been using fuel buried for many geological ages. Therefore, there is a need to switch over to alternative sources and bio-fuel is one such source. Prof. Singh also talked about some good things that we can be proud of like the establishment of the GB Pant Agricultural University in 1960. He called upon all scientists to translate the laboratory research to ground level and to find linkages between agriculture and bio-fuel, especially in the diverse climatic conditions of India. Professor Singh also talked about the National Green Tribunal and its commendable role. He warned that in future, an energy crisis is a certainty, yet we cannot use food-based materials for fuel as they are already scarce. He said that algae is an excellent source of methane and told that CSIR-IIP should collaborate with agricultural universities to increase the income of our farmers.

This was followed by two short lectures on bio-fuels by Dr Anil Sinha, Senior Scientist, Mr Mohit Anand, Scientist, and Mr. Saleem Akhtar Farooqui, Scientist (jointly) who chose the topic '*Bio-fuel for Aviation*' and Dr Neeraj Atray, Sr. Scientist, who spoke on '*Bio-diesel as an Alternative Fuel*.'

The programme, compered by Dr Neeraj Atray, Sr. Scientist, concluded with a vote of thanks by the Controller of Administration, Mr Jaswant Rai.

Later in the day, select students of B.Tech. courses from the University of Petroleum & Energy Studies, Dehradun, The Graphic



**Students visiting the laboratories**

Era University, Dehradun as also the students of the Kendriya Vidyalaya, CSIR-IIP from the 11<sup>th</sup> & 12<sup>th</sup> standards were taken for a visit to the Biotechnology Laboratory, the Thermo-catalysis Laboratory, the Chemical Conversion Area and the Bio- jet Laboratory and were shown demonstration runs as well as various posters on the subject.

**CANCER AND ANTI-TOBACCO AWARENESS PROGRAMME, SEPTEMBER 7, 2017**

Increasing prevalence of cancer, limited access to resources and socio-cultural barriers are significant sources of apprehension and despair in India. Development and introduction of better and advanced healthcare systems, improving awareness and healthcare access to the ordinary people, as well as use of media and workshops to bring together the patients and the caregivers can go a long way in providing prophylactic measures and reducing mortality due to cancer in India.

Aiming towards this, **Anandi Sheroes (NGO/Patient Support Group)** in association with **the CSIR-Indian Institute of Petroleum, Dehradun (Uttarakhand)** organized a **Cancer Awareness And Anti-tobacco Programme: *Science for Society***, on 07<sup>th</sup> September 2017 in the Institute premises. Cancer specialists from Dehradun, Doctor Vimal Pandita (Medical Oncologist) and Dr Mahesh Sultania (Surgical Oncologist) were the main speakers for this programme.



**Dr Vimal Pandita**

Dr Vimal Pandita has an experience of ten years in the field of oncology. He has trained at renowned hospitals like the Tata Memorial Hospital and has treated thousands of patients so far. He is actively involved in the programmes on cancer awareness and its detection.

Dr Mahesh Sultania has trained in super-speciality at the All India Institute of Medical Sciences (AIIMS), New Delhi. He was there for the last eight years and has recently joined the Max Hospital, Dehradun. His main area of interest lies in the cancer of the head and the throat, but he also treats gastrointestinal and thoracic tumours.



**Dr Ghanshyam Thakkar, RMO, CSIR-IIP**

Dr Ghanshyam Thakkar, Resident Medical Officer, CSIR-IIP, while conducting the programme, initiated with the remarks on the nature of cancer, which is an uncontrolled growth of cells in any part of the body.

Mr Amar Kumar Jain, Acting Director, CSIR-IIP, spoke as the



**Mr Amar Kumar Jain speaks**

First Person of the Institute and called the programme an excellent opportunity to understand cancer, which is regarded as a fatal disease, in its right perspective, with experts present on the dais.

A video was shown on the work being carried out by Anandi Sheroes, christened after the first lady doctor of India, Mrs Anandibai Gopalrao Joshi of Maharashtra.

*"Science for Society is one of the multidisciplinary programmes initiated by Anandi Sheroes to connect with people in science to increase their understanding of cancer which will benefit masses. Through their knowledge they will act as health communicators to spread right information to the society",* said Ms Sarika Rana, founder Anandi Sheroes. She gave some glimpses from her



**Ms Sarika Rana at the podium**

personal experience of cancer, and gave a presentation on generating awareness about the disease, the myths related to, and the ways of dealing with, it. Ms Sarika Rana who is also herself a cancer survivor, further said, *"This program will spread a positive message to the society and will help cancer patients to cope up with their treatment or cancer survivors to lead a normal life, besides advocating preventive measures among the youth."*

Dr Vimal Pandita said, *"Health education plays a crucial role in the management of cancers. Tobacco is still the leading carcinogen of the world, and we need to make people aware of cancer risks."* He gave a presentation on the symptoms of cancer, the myths, and facts about the disease and its treatment, its causes, etc.

This presentation was followed by an interactive session in which both Dr Mahesh Sultania and Dr Pandita replied to the queries of the audience.

The programme, coordinated by Dr D C Pandey, Head Technical Directorate, CSIR-IIP, ended with a thanks vote by Ms Sarika Rana.

**CSIR PLATINUM JUBILEE TECHNOFEST, AUGUST 14-16, 2017**

CSIR (Council of Scientific and Industrial Research), which completed 75 years of its presence on India's scientific horizon on September 26, 2017, has been holding multiple events as part of its Platinum Jubilee celebrations over the last one year. As a part of its Platinum Jubilee Year, CSIR took part in scientific exhibitions like the Technofest-2016 organized at the Pragati Maidan, Delhi, and, under a drive initiated by the CSIR Headquarters, New Delhi, the different national institutes/laboratories under it have been organizing a chain of 'CSIR Platinum Jubilee Technofests' on the themes relevant to the mandate of the Council.

Inaugurated by Mr Amar Kumar Jain, Chief Scientist, and Acting Director, CSIR-Indian Institute of Petroleum on 14<sup>th</sup> August, this event was held during 14<sup>th</sup>-16<sup>th</sup> August 2017 at the Community Centre of the CSIR-Indian Institute of Petroleum, Mohkampur, Dehradun. It presented a unique opportunity for all the



**CSIR Platinum Jubilee Technofest inauguration at CSIR-IIP**

employees in the government organizations, the citizens in general and for students from local educational institutions in particular, to get a direct experience of R&D work while presenting an excellent occasion for ex-IIPians to refresh their memories with the Institute as well as the parent body, CSIR. The inaugural proceedings were conducted by Dr D C Pandey, Head, Technical Directorate.



**Students get a taste of R&D work with Dr V V D N Prasad, Principal Scientist**

The CSIR Platinum Jubilee Technofest at the CSIR-IIP featured several stalls on scientific themes like Aerospace And Strategic Sector, Ecology And Environment, Energy, Chemicals And Petrochemicals, Nurturing Human Resources, Engineering And Infrastructure, CSIR- 800 (Societal Interventions), Genetics And Healthcare, Materials, Minerals/ Mining, Enabling Leather, Water, Food And Nutrition, Agriculture And Floriculture, Intellectual Property And Entrepreneurship.

### MoU's/NDA's SIGNED

The Institute signed a Memorandum of Understanding (MoU) with Uttaranchal University on September 5, 2017, for collaboration in the field of Catalysis, Material Science, Renewable Energy, Biofuels, Polymers, Organometallics, Industrial Biotechnology and Biomass-to-Energy, etc.



MoU with UIT

The MoU was signed by Dr Anjan Ray, Director, CSIR-IIP and Prof. (Dr) N K Joshi, Vice-Chancellor of the University. Dr N Viswanadham, Senior Principal Scientist, Conversion and Catalysis Division (CSIR-IIP) and Dr Ajay Singh, Principal, Applied & Life Sciences (UIT), also signed as witnesses.

### RESEARCH ACTIVITIES

#### Sponsored Projects Taken Up

- Preliminary feasibility study for production of paraffin and microcrystalline waxes from slack wax produced at HPCL, Mumbai refinery using CSIR-IIP solvent de-oiling technology
- Feasibility studies on compatibility of graphene-based additives with fully formulated engine oils of Gulf Oil
- Comparative testing of tribological properties of Russian and Indian main gearbox lubricating oil OX-27 (TN-600)
- Catalytic cracking of cresol dimers into its monomers at bench scale level (1 Kg/day) over equilibrium fluid catalytic cracking catalyst
- Performance investigation of fire-resistant hydraulic fluid quintolubric 888 68
- Testing and evaluation of fire-resistant hydraulic fluid, HFDUC-68 oil sample

#### In-house Projects Taken Up

- Catalyst development for the conversion of kerosene (C<sub>13</sub>-C<sub>14</sub>) to transportation fuel (gasoline) and propane/butane

- Eco-campus initiative of CSIR-IIP to develop a sustainable model campus
- Effect of surface texture and hard coating on the friction behavior of piston-ring-liner tribo system
- Sponsored Projects Completed
- Technology development for simultaneous production of pure benzene and US-grade gasoline from FCC C<sub>6</sub> heart cut (deisohexaniser side cut), generation of technology information package (TIP) and support during development of the BDEP
- Development of rubber extender oil from clarified slurry oil
- Process engineering design package for solvent deoiling unit
- Analysis of fuel oil from centre for science and environment
- In-house Projects Completed
- Hydrogenation of CO<sub>2</sub> over nano-catalysts
- Development of nano-structured catalyst for low-temperature methane activation
- Development of nano-structured catalyst for preferential oxidation of carbon monoxide in the presence of excess hydrogen
- Studies on relationship between feedstock composition & mesophase/semicoke formation and their surface morphology
- Technology development for making on grade aromatic oil of desired low PCA content from lube distillate
- Field study to ascertain the effectiveness of different measures taken-up by OMCS on benzene emission at petrol stations in India
- Graphene-polymer composites for high end uses: preparation characterization & evaluation
- Study and development of temperature monitoring unit for in-house R&D works & processes
- Study of ethane as fuel for compression ignition engine
- Process/catalyst development for the production of naphthenic base oil (NBO) from foots oil
- Ionic liquids/immobilized ionic liquids as recyclable catalysts for the alkylation of aromatic compounds

### RESEARCH OUTPUT

#### Papers Published

- Lignocellulosic sugar management for xylitol and ethanol fermentation with multiple cell recycling by *Kluyveromyces marxianus* IIPE453, *Diptarka Dasgupta*, *Debashish Ghosh*, *Sheetal Bandhu* and *D K Adhikari*, *Microbiological Research*, **200**, 64-72, July 2017
- Monitoring petroleum fuel adulteration: A review of analytical methods, *V Bhanu Prasad* and *Pankaj K Kanaujia*, *Trends in Analytical Chemistry*, **92**, 1-11, July 2017
- Kinetics and Feasibility Studies of Thiol Oxidation using Magnetically Separable Mg-Al Layered Double Hydroxide Supported Cobalt Phthalocyanine Catalyst, *Deepak K Chauhan*, *Pawan Kumar*, *Rahul Painuly*, *Sunil Kumar*, *Suman L Jain* and *S K Ganguly*, *Fuel Processing Technology*, **162**, 135-146, July 2017
- Visible light assisted hydrogen generation from complete

- decomposition of hydrous hydrazine using rhodium modified TiO<sub>2</sub> photocatalyst, *Pawan Kumar, Anurag Kumar, Clemence Queffelec, Dietrich Gudat, Qi Wang, Suman L Jain, Rabah Boukherroub and Sabine Szunerits*, Photochemical & Photobiological Sciences, **16**(7), 1036-1042, July 2017
- Hydrotreatment of jatropha oil over NiMoS catalyst supported on thermostable mesoporous silica doped titania for the production of renewable drop-in diesel, *Rohit Kumar, Saleem Akhtar Farooqui, Mohit Anand, Rakesh Kumar, Rakesh Joshi, Azeem Khan and A K Sinha*, Catalysis Communications, **98**, 102-106, July 2017
  - Synthesis and Characterization of Iso-Undecenoic and Iso-Undecanoic Acids Based Polyol Esters, *Sathyam Reddy Yasa, Saravanan Krishnasamy, Raj Kumar Singh, Vijayalakshmi Penumarthy*, Ind. Eng. Chem. Res., **56** (26), 7423-7433, July 2017
  - Highly selective transfer hydrogenation of  $\alpha,\beta$ -unsaturated carbonyl compounds using Cu-based nanocatalysts, *Nazia Siddiqui, Bipul Sarkar, Chandrashekar Pendem, Rubina Khatun, Konthala, L. N Sivakumar, Takehiko Sasaki, Ankur Bordoloi and Rajaram Bal*, Catalysis Science & Technology, **7**(13), 2828-2837, July 2017
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  - Pyrolysis of agricultural biomass residues: comparative study of corn cob, wheat straw, rice straw and rice husk, *Bijoy Biswas, Nidhi Pandey, Yashasvi Bisht, Rawel Singh, Jitendra Kumar and Thallada Bhaskar*, Bioresource Technology **237**, 57-63, August 2017
  - Influence of Cu nanofluids on the rolling contact fatigue life of bearing steel, *Prashant Thapliyal, G D Thakre*, Engineering Failure Analysis, **78**, 110-121, August 2017
  - Fabrication of reduced graphene oxide micropatterns by vacuum-ultraviolet irradiation: From chemical and structural evolution to improving patterning precision by light collimation, *Yudi Tu, Hiroshi Nakamoto, Takashi Ichii, Toru Utsunomiya, O P Khatri and Hiroyuki Sugimura*, Carbon **119**, 82-90, August 2017
  - Synthesis and catalytic activity of a Pd doped Ni-MgO catalyst for dry reforming of methane, *Rajib K Singha, Astha Shukla, A Sandupatla, A, G Deo and Rajaram Bal*, J. of Materials Chemistry A, **5**(30), 15688-15699, August 2017
  - High-Performance Multifunctional Fuel Additives Derived from Renewable Fatty Acids and Phosphazene, *Praveen K Khatri, Mounika Aila, Aruna Kukrety, Piyush Gupta, Rakesh C Saxena, Raj K Sing and Suman L Jain*, Journal of the American Oil Chemists' Society **94**, (8), 1111-1119, August 2017
  - Titania co-wrapped  $\alpha$ -Sulfur composite as a visible light active photocatalyst for hydrogen evolution using in-situ methanol from C<sub>60</sub> as a sacrificial agent, *Rajkumar Yadav and A K Sinha*, ACS Sustainable Chem. Eng., **5**(8), 6736-6745, August 2017
  - Synthesis, characterization, and application of CuO-Ce<sub>2</sub>O<sub>3</sub> nanocatalysts in wet air oxidation of industrial wastewater, *Anushree, Satish Kumar, Chhaya Sharma*, Journal of Environmental Chemical Engineering, **5**(4) 3914-3921, August 2017
  - A facile route for the regioselective synthesis of 1,4-disubstituted 1,2,3-triazole using copper nanoparticles supported on nanocellulose as a recyclable heterogeneous catalyst, *Mitali Chetia, Abdul A Ali, Ankur Bordoloi and Diganta Sarma*, Journal of Chemical Sciences, **129**(8), 1211-1217, August 2017
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  - A study of the synergy between support surface properties and catalyst deactivation for CO<sub>2</sub>-reforming over supported Ni nanoparticles, *Subhasis Das, Manideepa Sengupta, Jim Patel and Ankur Bordoloi*, Applied Catalysis A: General, **545**, 113-126, September 2017
  - Coking propensity during hydroprocessing of vacuum residues, deasphalted oils, and asphaltenes, *Ravindra. Prajapati, Kritika. Kohli, S K Maity and M O Garg*, Fuel, **203**, 514-521, September 2017
  - Mesoporous  $\gamma$ -Alumina with Isolated Silica Sites for Direct Liquid Hydrocarbon Production during Fischer-Tropsch Reactions in Microchannel Reactor, *Aditya Rai, Malayji G Sibi, Saleem A Farooqui, Mohit Anand, Asim Bhaumik and A K Sinha*, ACS Sustainable Chemistry & Engineering, **5**(9), 7576-7586, September 2017
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#### Patent(s) Sealed Abroad

- Ni nano-cluster supported on MgO-CeO<sub>2</sub>-ZrO<sub>2</sub> catalyst for tri-reforming of methane and a process for preparation thereof, *Ankur Bordoloi, Rajib Kumar Singha, Rajaram Bal, Manoj Kumar and Chandrashekar Pendem*, USA, Patent No. 9630167, dt. 25.04.2017
- A process for separating aromatics and removal of sulphur compounds from heart cut of catalytically cracked gasoline, *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*, Japan, Patent No. 6138938, dt. 12.05.2017
- Sweetening of liquefied petroleum gas or light petroleum distillates comprises extracting mercaptans contained in distillates or light straight run naphtha using aqueous or alcoholic solution of alkali metal hydroxide of disulfides, *Bir Sain, S N Puri, G Das, B P Balodi, Sunil Kumar, V K Bhatia, V K Kapoor, G P Rai and T S R Prasada Rao*, Germany Patent No. 10115725, dt. 04.08.2017
- 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, China, Patent No. ZL201380049094.5, dt. 25.08.2017

- Process for recovery of pure components from product mixture of one step dimethyl ether (DME) synthesis reactor, Sunil Kumar, S M Nanoti and M O Garg, USA, Patent No. 9,758,460, dt. 12.09.2017

#### Patent(s) Filed in Abroad

- H<sub>2</sub> and Bio-Fuel Production from Renewable Feedstocks, A K Sinha, Mohit Anand, Saleem Akhtar Farooqui, Rakesh Kumar, R K Joshi, Rohit Kumar and Aditya Rai, USA, Application No. 15/645629 dt 10.07.2017
- Heavy petroleum residue derived iron incorporated sp<sup>2</sup> carbon nanogranules for improved synthesis of light olefins, Indrajit Kumar Ghosh, Umesh Kumar and Ankur Bordoloi, USA, Application No. 15/706262, dt. 15.09.2017

#### Patent(s) Sealed in India

- A process for the conversion of paraffins, olefins and aromatics in mixed feedstocks into isoparaffins. Nagabhatla Viswanadham, Raviraj Kamble, Amit Sharma, Jagdish Kumar, Bhagwan Singh Negi, Gudimella Muralidhar and Madhukar Onkarnath Garg, Patent No. 286861, dt. 30.08.2017
- A process for covalent immobilization of oxidation catalyst, Suman Lata Jain, Anil Kumar Sinha, Bhawan Singh, Bharat Singh Rana, Praveen Kumar Khatri and Bir Sain Patent No. 287076, dt. 05.09.2017

#### TRAINING PROGRAMMES ORGANIZED

##### Programmes on Petroleum Refining Technology

- For the Chemical Engineers of NRL, Numaligarh & Honeywell, Bangalore, July 10-21, 2017



Faculty & Trainees of the programme dated July 10-21, 2017

- Training Programme on 'Petroleum Refining Technology' for Chemical Engineers of Indian Oil Corporation Limited (IOCL), New Delhi, August 28–October 13, 2017

#### Other Programmes

- Training Programme on 'Operation & Maintenance of CFR Engines' for Executives of Different Refineries, August 28 – September 8, 2017
- Training Programme on 'Laboratory Practicals' for NTPC, NOIDA, September 18-29, 2017

- Training Programme on 'Solvent Extraction Technology' for Executive Engineers for BPCL, Mumbai was organized by CSIR-IIP at BPCL, Mumbai, September 25-26, 2017

#### EXCHANGE OF KNOWLEDGE

##### Papers Presented in Conferences/Seminars/Symposia

##### 13<sup>th</sup> International Conference on Gas-Liquid-Solid Reactor Engineering (GLS-13), Brussels, Belgium, August 20-23, 2017

- Kinetic modeling for catalytic cracking of pyrolysis oils with VGO in an FCC unit, D V Naik, M O Garg, Vimal Kumar and B Prasad

##### BESCon-2017, Biological Engineering Society a Netaji Subhas Institute of Technology, University of Delhi, New Delhi, September 8-9, 2017

- Chicken feather waste supported Laccase immobilization for biotransformations, Sunil Kumar Suman, Padma Lata Patnam, Suman Lata Jain and Sanjoy Ghosh

##### National Conference on Alternate Energy Resources, Environment Protection and Global Economic Growth (NCAERG -2017), DIT, Dehradun, September 8–9, 2017

- Absorption of CO<sub>2</sub> in aqueous solution containing multiamine group, Pradeep Kumar, V K Chibber, Subham Paul and Ankush B Bindwal

#### Colloquia and Talks

- Dr Apurba Sinhamahapatra, UNIST, South Korea, 'Reduced TiO<sub>2</sub> based materials for solar energy utilization', August 30, 2017
- Dr Bhaskar Mondal, Max Planck Institute for Chemical Energy Conversion, Germany, 'Roadmap Towards the Design of New Catalysts using computational insights into chemical reactivity', September 15, 2017
- Prof. B Ghosh, Jadavpur University, Kolkata, 'Energy sustainability', September 19, 2017
- Dr Amol Deshpande, BITS Pilani, KK Birla Goa, 'Unmixed combustion (UMC) for heat transfer applications', September 22, 2017

#### DISTINGUISHED VISITORS

- Wg Cdr Asheesh Srivastava, Research Fellow, Center for Air Power Studies, New Delhi visited for technical discussion on aviation oil July 10, 2017
- Dr Sanjeev Singh, Lead Auditor, DNV GL, New Delhi visited for Third Periodic Audit (PA-III), July 18, 2017
- Dr Natarajan, Sc G Director, RIC, Dr V Venkatesan, Scientist E, Research & Innovation Centre Defence Research and Development Organisation, Chennai and Mr Pankaj Verma, Scientist E, High Energy Materials Research Laboratory (HEMRL), Pune visited for technical discussion, July 19, 2017
- Mr J P Prabhu, Chief Manager-Process, and Mr H Nagendra, Refinery Project Process, HPCL, Mumbai visited for Kick off Meeting Wax plant at HPCL, Mumbai Refinery July 27, 2017
- Mr Binoy Mishra, Director, Emission Control, New Delhi visited for technical discussion, July 31, 2017
- Mr Ashok Suyal, Rays Enserv, Patiala visited Institute for technical discussion, August 8, 2017



- Mr Sanjay Gope, Director - Sales and Marketing, Berrykem India Private Limited, Bangalore visited Institute for technical discussion, August 9, 2017
- Dr Rakesh Agrawal, Professor, Purdue University, USA visited Institute for technical discussion, August 11, 2017
- Mr R Sivakumar, DGM, Hindustan Aeronautics Limited (HAL), Bangalore, visited for Development of grease for helicopter panel, August 11, 2017
- Mr Ashvini Kumar Singh, Asst. General Manager, Finolex Cables Limited, Haridwar visited Institute for testing, August 23, 2017
- Mr Aditya J Rane, Senior Services Manager, Indian Additives Limited, Mumbai, visited Institute for new project proposal, August 23, 2017
- Mr Nachiket Muley, Chief of Technology, e-Shakti Binary Currents (P) Limited, Aurangabad visited for technical discussion, September 5, 2017

#### INTERNATIONAL VISITS

- Dr Thallada Bhaskar, Principal Scientist, to attend the 'Shimadzu Global Innovation Summit 2017' at Shimadzu Corporation, Kyoto, Japan, July 4-6, 2017
- Dr Anjan Ray, Director, as a member of the CSIR delegation, visited the University of South Wales to discuss strengthening of research/technology partnership, to attend Australian and New Zealand Federation of Chemical Engineering Conference (Chemeca) and the Academic Sharp Brain Event of the RMIT University, to exhibit CSIR's technological achievements in chemical engineering and technology at the 'Royal Australian Chemical Institute (RACI) Conference,' for signing of academic co-operation MoU between the AcSIR and the RMIT University, Australia, to attend a meeting with the Commonwealth Scientific and Industrial Research Organization (CSIRO) for a review of ongoing co-operation etc., and to visit the Deakin University to explore collaboration in high-end Science and Technology, July 23-28, 2017

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

##### 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:

- Discussion on recognition to LLPs, DSIR, New Delhi, July 5, 2017
- The first meeting of the CII National Committee on Higher Education for the year 2017-18, New Delhi, July 5, 2017
- CSIR-KVS MoU signing ceremony in the presence of Hon'ble Minister of Science & Technology, Dr Harsh Vardhan and Hon'ble Minister for Human Resource Development, Mr Prakash Javadekar, New Delhi, July 6, 2017
- The 33<sup>rd</sup> meeting of the Sectional Committee on Petroleum and

*Their Related Products of synthetics or biological origin', Sectional Committee PCD 3 and its sub-committees, Bureau of Indian Standards, New Delhi, July 10, 2017*

- Key-note address on 'National R&D Perspective: Role of CSIR' in the 34<sup>th</sup> Induction Training Programme for the newly recruited scientists, CSIR-HRDC, Ghaziabad, July 17, 2017
- World Biofuel Day celebrations organized by the Ministry of Petroleum & Natural Gas, New Delhi, August 10, 2017
- 56<sup>th</sup> Governing Body Meeting of the PCRA, Ministry of Petroleum & Natural Gas, New Delhi, August 17, 2017
- 'Roundtable Meet on Developing Country-specific Models for the Promotion of R&D via PPP Mode', Punjab University, Chandigarh, August 19, 2017
- 80<sup>th</sup> meeting of the Scientific Advisory Committee (SAC) on Hydrocarbons of the Ministry of Petroleum & Natural Gas, Mumbai, September 6, 2017
- Guest of Honour at 'One-day Conclave on CSIR Societal Technologies (C-CST)', CSIR-IMMT, Bhubaneswar, September 22, 2017
- Industry Day at the Indian Institute of Technology (IIT), New Delhi, September 23, 2017
- '76<sup>th</sup> CSIR Foundation Day Function and Celebrations of Conclusion of the CSIR Platinum Jubilee Year', Vigyan Bhawan, New Delhi, September 26, 2017

#### Participation by other S&T Staff

- Dr Soumen Dasgupta, Senior Scientist and Dr Jasvinder Singh, Principal Technical Officer, 'Conference and Exhibition on Bio-Energy-Urja Utsav,' organized by the Ministry of Petroleum & Natural Gas and Oil Marketing Companies viz. HPCL, BPCL & IOCL, Pune, July 7-8, 2017
- Dr Suman L Jain, Senior Scientist, 'CRSI-NCI-21 Symposium', CSIR-IICT, Hyderabad, July 13-16, 2017
- Dr Rajaram Bal, Senior Scientist, 'Nanotechnology Conclave-2017 Towards Real-life Nanotechnology Products & Applications', CII, New Delhi, August 30-31, 2017
- Dr R C Saxena, Senior Technical Officer and Mr Praveen K Khatri, Technical Assistant, '2<sup>nd</sup> Programme on Latest Trends in Petroleum Exploration', KDMIPE (ONGC) by FIPI, September 4-6, 2017
- Dr S K Maity, Principal Scientist, Dr Sunil Kumar, Senior Scientist, Dr Anand Mohit, Scientist & Mr Saleem Akhtar Farooqui, Scientist, 'Refining India-2017 - 5<sup>th</sup> PTQ International Conference', New Delhi, September 18-19, 2017

#### HRD/AWARENESS EVENTS

##### Programmes at the CSIR-HRDC, Ghaziabad

- Mrs Kamla Yadav, Technical Assistant, Workshop on Evaluation of Measurement Uncertainty and ISO-17025", CSIR-HRDC, Ghaziabad, July 25-28, 2017
- Mr Mukesh Gairola, Section Officer (F&A), Mr Narinder Rawat, Senior Technician and Anil Kumar, Senior Technician, Awareness Programme on Implementation of GST by National Academy of Customs, Excise and Narcotics (NACEN), CSIR-HRDC, Ghaziabad, August 24, 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

### 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:

- 26 Cadets of the Rashtriya Indian Military Academy (RIMC) along with two masters, visited the Institute, July 31, 2017



RIMC Cadets on their visit to the Institute

- 82 students of Classes 11<sup>th</sup> & 12<sup>th</sup> (Science), St. Kabeer Academy, Dehradun along with three faculty members, visited the Institute, August 11, 2017
- A team of 14 officers of the Nation Technical Research Organisation, (NTRO), Jolly Grant Airport, Dehradun, visited the Institute, September 20, 2017

### DNV AUDIT ISO 9001:2008

DNV Third Periodic Audit (PA-III) of the institute was carried out for recertification. Dr Sanjeeva Singh was the Lead Auditor, DNV GL, New Delhi, July 18, 2017

### HONOURS & AWARDS

- **Chemical Research Society of India (CRSI) Bronze Medal awarded to Dr Suman L Jain, Senior Scientist**

CRSI is a professional body that promotes and facilitates research and education in all branches of chemistry. CRSI is one of the best Chemistry research societies in India. The silver and gold medals are given to senior researchers, while bronze is awarded to young researchers for their original contributions in the field of research concerning Chemistry.



Dr Suman L Jain being honoured by Prof N Sathyamurthy

Dr Suman L Jain, Senior Scientist, Chemical Sciences Division received this prestigious award at IICT, Hyderabad during the CRSI-NSC-21<sup>st</sup> Symposium in Chemistry during 14-16 July 2017. Dr Suman L Jain became one of 19 young Indian researchers to receive the prestigious Bronze Medal for 2017.

- **Felicitation of Mr P K Jain, Ex-Scientist**

Mr P K Jain, Ex-Scientist, CSIR-IIP, was felicitated by the Institution of Engineers (India), Dehradun Centre as a Veteran Engineer on the 50<sup>th</sup> Engineers' Day, September 15, 2017. This honour was bestowed upon him by the Hon'ble Chief Minister of Uttarakhand, Mr Trivendra Singh Rawat, in a function held at Dehradun. Mr Jain was also presented with a memento, a shawl and a live plant.



Mr P K Jain receiving the honour from Hon'ble CM, Uttarakhand

- **CSIR-IIP bags Indian Chemical Council (ICC) Award-2016 jointly with the Reliance Industries Ltd., Jamnagar, Gujarat**  
CSIR-IIP won the Indian Chemical Council (ICC) Award-2016 jointly with the Reliance Industries Ltd., Jamnagar, Gujarat for "Excellence in Process Design (including Process Intensification) & Engineering" for the year 2016. The award was given away at the ICC Award Function-2016 on 29<sup>th</sup> September, 2017 at Mumbai

- *Congratulations!*



CSIR-IIP & RIL teams receiving the ICC Award-2016

### PhD/D Phil DEGREE AWARDS

- Ms Nikita Singhal, awarded Ph.D entitled 'Development of Metal Oxide Catalyst for the Photocatalytic Reduction of CO<sub>2</sub> to Fuel' under the supervision of Dr Umesh Kumar by Academy of Scientific & Innovative Research (AcSIR), August 11, 2017
- Mr Diptarka Dasgupta, awarded Ph.D entitled 'Xylose value addition using engineered biocatalyst' under the supervision of Dr D K Adhikri and Dr Debashish Ghosh by Academy of Scientific & Innovative Research (AcSIR), September 1, 2017
- Ms Reena Goyal awarded Ph.D entitled 'Synthesis and Characterization of Heteroatom Doped Carbon Nanomaterials and their Catalytic Evaluation' under the

supervision of Dr Ankur Bordoloi by Academy of Scientific & Innovative Research (AcSIR), September 11, 2017

#### HEALTH CAMPS

- A free camp on Bone Mineral Density was organized in the CSIR-IIP Health & Family Welfare Centre, August 22, 2017

#### सीएसआइआर-आइआइपी स्टाफ क्लब की गतिविधियाँ

- संस्थान के कर्मचारियों के बच्चों के लिए स्वतंत्रता दिवस के अवसर पर एक चित्रकला प्रतियोगिता तथा एक निबंध प्रतियोगिता का अयोजन आइ आइ पी स्टाफ क्लब के तत्वावधान में दिनांक 8 अगस्त, 2017 को किया गया, जिनमें समग्रतः लगभग 100 बच्चों ने भाग लिया।

#### सद्भावना दिवस, 18 अगस्त, 2017

सद्भावना दिवस पर संस्थान में एक शपथ-ग्रहण समारोह का आयोजन 18 अगस्त, 2017 को किया गया, जिसमें कर्मचारियों व अधिकारियों ने आपसी सद्भावना के प्रति अपनी प्रतिबद्धता को दोहराया।

#### स्वतंत्रता दिवस समारोह, 15 अगस्त, 2017

स्वतंत्रता दिवस समारोह का आयोजन 15 अगस्त, 2017 को किया गया। मुख्य भवन के प्रांगण में निदेशक डॉ अंजन रे के द्वारा ध्वजारोहण के पश्चात संस्थान के प्रेक्षागृह में शेष कार्यक्रम का आयोजन किया गया, जिसमें डॉ अंजन रे, निदेशक ने देश-भक्तों व स्वतंत्रता-सेनानियों को श्रद्धांजलि देते हुए बीते वर्ष की उपलब्धियों, नई शोध सुविधाओं और महत्वकांक्षी परियोजनाओं की चर्चा की। पारंपरिक रूप से केंद्रीय विद्यालय, भापेस के बच्चों ने उत्तम सांस्कृतिक प्रस्तुतियाँ दीं। इस अवसर पर डॉ रे ने भापेस स्टाफ क्लब द्वारा दिनांक 8 अगस्त, 2017 को आयोजित चित्रकला व निबंध प्रतियोगिताओं के विजेताओं, संस्थान के कर्मचारियों के उत्तम अंक पाने वाले बच्चों तथा केंद्रीय विद्यालय, भापेस के हाईस्कूल व इंटरमीडिएट कक्षाओं के सर्वश्रेष्ठ विद्यार्थियों को भी छात्रवृत्तियाँ प्रदान कीं एवं उन्हें पुरस्कृत भी किया।



डॉ अंजन रे द्वारा ध्वजारोहण

#### VISHWAKARMA POOJA

- The annual celebration of the Vishwakarma Pooja was organized on September 17, 2017 in the Institute premises.



Mr A K Jain, Acting Director, hosting the Pooja

#### राजभाषा-संबंधी गतिविधियाँ

- हिंदी माह- 2017 का समापन समारोह, 19 सितंबर, 2017

सीएसआइआर-भारतीय पेट्रोलियम संस्थान (सीएसआइआर-भापेस), देहरादून में एक सितंबर, 2017 से चली आ रही हिंदी माह-2017 की गतिविधियों का समापन समारोह आयोजित किया गया। समारोह की मुख्य अतिथि, हिंदी साहित्यकार श्रीमती उषा वधवा ने अपने हिंदी सीखने से लेकर हिंदी लेखन में सक्रिय होने की यात्रा पर प्रकाश डाला और कहा कि गांधी जी ने 1914 में ही कहा था कि हिंदी जन-मानस की भाषा है। इसका विश्व में तीसरा स्थान है। अतः इसके प्रयोग में ईमानदारी होनी चाहिए, मात्र रस्म अदायगी नहीं। हिंदी कई भाषाओं-बोलियों, यहां तक कि भारत में बाहरी आक्रांताओं की शब्दावली से भी पुष्ट हुई है, क्योंकि भाषा एक बहती हुई नदी है, जो सभी को समेट कर चलती है। विदेशी व देशी भाषाओं की शब्दावली से समृद्ध होकर हिंदी अपने आधुनिक रूप में है। समय के साथ-साथ तकनीक के विस्तार से इसमें परिवर्तन अवश्यभावी है। इसमें तकनीकी



श्रीमती उषा वधवा द्वारा हिंदी माह समापन समारोह-2017 का उद्घाटन

शब्दों का अनुवाद न कर इन्हें जस-का-तस अपनाया जाना चाहिए। किंतु खिचड़ी भाषा से बचकर भाषा का शुद्ध रूप अपनाया जाना चाहिए। अपनी भाषा का सम्मान आवश्यक है, क्योंकि भाषा के साथ संस्कृति भी चलती है। संस्कृति को भूलना नहीं चाहिए। देश में आपसी संपर्क व आपसी भावनाओं के आदान-प्रदान के लिए एक सामान्य भाषा आवश्यक है, और यह कार्य हिंदी करती है।

इससे पूर्व कार्यक्रम का संचालन करते हुए श्रीमती वधवा का परिचय श्री एम सी रतूड़ी, वरिष्ठ हिंदी अधिकारी ने दिया। डॉ अंजन रे, निदेशक, सीएसआइआर-भापेस ने अपने स्वागत भाषण में साहित्य व कलाओं में रुचि के लिए परिवार के वातावरण को महत्वपूर्ण बताया।

मुख्य-अतिथि ने इस अवसर पर हिंदी माह की गतिविधियों के रूप में



श्रीमती वधवा अपने विचार व्यक्त करती हुई

आयोजित विभिन्न प्रतियोगिताओं के विजेताओं के साथ ही अपना सरकारी काम-काज मूल रूप से हिंदी में करने वाले कर्मचारियों को भी पुरस्कृत किया। समारोह का समापन श्री जसवंत राय, प्रशासन नियंत्रक के धन्यवाद-प्रस्ताव के साथ हुआ। इस अवसर पर श्रीमती वधवा के कथा-संग्रह 'ऐसा क्यों है' को भी इच्छुक पाठकों को उपलब्ध कराया गया। कार्यक्रम के संचालन में राजभाषा अनुभाग के श्री देवेन्द्री राय व श्री तिलक कुमार का विशेष सहयोग रहा।

### संस्थान-परिवार के समाचार

#### (क) संस्थान-परिवार में वृद्धि

##### (i) नई नियुक्तियाँ

- डॉ श्रीनिवास पडाला, वरिष्ठ वैज्ञानिक 26.07.2017
- डॉ किशोर नाट्टे, वरिष्ठ वैज्ञानिक 28.08.2017
- डॉ आनंद नाराणी, वैज्ञानिक 04.09.2017

##### (ii) स्थानांतरण पर आगत

- श्री गौरव गुप्ता, वैज्ञानिक, सीएसआइआर-केन्द्रीय वैज्ञानिक उपकरण संगठन, चण्डीगढ़ 21.08.2017
- श्री विश्वास सैनी, तकनीकी सहायक, सीएसआइआर-केन्द्रीय इलेक्ट्रॉनिकी अभियांत्रिकी अनुसंधान संस्थान, पिलानी से 01.09.2017

स्वागत!

#### (ख) पदोन्नतियाँ

##### वैज्ञानिक से वरिष्ठ वैज्ञानिक

- डॉ अतुल रंजन 19.12.2013

##### तकनीकी सहायक से तकनीकी अधिकारी

- श्रीमती पूजा यादव 19.03.2015

##### वरिष्ठ तकनीशियन (1) से वरिष्ठ तकनीशियन (2)

- श्री दर्शल लाल (सेवानिवृत्त) 17.01.2010
- श्री एन एन बहुगुणा 09.09.2012
- श्री हरभजन सिंह 02.11.2013
- श्री एच के शाही (सेवानिवृत्त), 05.02.2015
- श्री मुकेश कुमार 06.03.2015
- श्री राजेन्द्र प्रसाद 26.03.2015
- श्री गोविन्द सिंह मेहता 26.03.2015
- श्री गोविन्द सिंह रावत 26.03.2015

##### तकनीशियन (1) से तकनीशियन (2)

- श्री अब्बल सिंह 31.07.2013
- श्री अशोक कुमार-1 19.07.2013
- श्री अशोक कुमार ठाकुर 19.07.2013
- डॉ0 (श्रीमती) अरुणा कुकरेत 21.07.2013
- श्री देवेन्द्र सिंह बुटोला 19.07.2013
- श्री डैनियल शाह 19.07.2013
- श्री गिरीश चंद्र तिवारी 31.07.2013
- श्री गंभीर सिंह 19.07.2013
- श्री खेम सिंह 31.07.2013
- श्री मयंक मिश्रा 19.07.2013
- श्री महेन्द्र सिंह नेगी 19.07.2013
- श्री मनमोहन सिंह गुसाई 19.07.2013
- श्री नवीन कुमार मौर्य 31.07.2013
- श्री प्रदीप सिंह नेगी 19.07.2013

- श्री पूरन सिंह असवाल 19.07.2013
- श्री परवेज आलम 19.07.2013
- श्री प्रदीप सिंह पंवार 19.07.2013
- श्री पुष्पराज शर्मा 31.07.2013
- डॉ0 (श्रीमती) पी नागेंद्रम्मा 31.07.2013
- श्री ऋतुराज नेगी 19.07.2013
- श्री राजेंद्र कुमार 19.07.2013
- श्री नसीम अहमद 19.07.2013
- श्री राजीव पंवार 19.07.2013
- श्री राजेश शर्मा 31.07.2013
- श्री शिव प्रसाद नौटियाल 19.07.2013
- डॉ संदीप कुमार सक्सेना 19.07.2013
- श्री सतीश मणि (सेवानिवृत्त) 31.07.2013
- श्री संजीव कुमार 19.07.2013
- श्री तसलीम खान 19.07.2013
- श्री विनोद कुमार 19.07.2013
- श्री विवेक कुमार शर्मा 19.07.2013

##### प्रयोगशाला परिचर (1) से प्रयोगशाला परिचर (2)

- श्री संजय कुमार 10.11.2011
- श्री हैरॉल्ड ग्लैडविन 10.11.2011
- श्री प्रदीप सिंह पुंडीर 10.11.2011
- श्री राकेश कुमार 10.11.2011
- श्री मोहन सिंह 10.11.2011
- श्री ज्योति प्रसाद 10.11.2011
- श्री शिवराम सिंह 29.11.2011
- श्री नरेन्द्र सिंह नेगी 25.11.2011
- श्री राम किशोर मौर्य 06.01.2012
- श्री नवीन भट्ट 19.07.2013
- श्री बुरहानुद्दीन 19.07.2013

हार्दिक बधाई!

#### (ग) संस्थान-परिवार से विदाई

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

##### 31 जुलाई, 2017

- श्री हाकिम सिंह, वरिष्ठ तकनीकी अधिकारी (3)
- श्री लक्ष्मी नारायण, प्रधान तकनीकी अधिकारी

##### 31 अगस्त, 2017

- श्री सतीश मणी, तकनीशियन (2)

##### (ii) स्थानांतरण पर अन्यत्र तैनाती

- श्री आरक्षित माझी, वरिष्ठ वैज्ञानिक, सीएसआइआर-खनिज एवं पदार्थ प्रौद्योगिकी संस्थान, भुवनेश्वर को 31.07.2017

भावभीनी विदाई!

##### (iii) पदोन्नति पर स्थानांतरण

- श्री देवेन्द्र राय, वरिष्ठ आशुलिपिक, सीएसआइआर-केन्द्रीय भवन अनुसंधान संस्थान, रुड़की को 22.09.2017, निजी सचिव के रूप में
- श्री एल आर कौशिक, सहायक (भं0 एवं क0) ग्रेड-1, सीएसआइआर-केन्द्रीय भवन अनुसंधान संस्थान, रुड़की को 28.09.2017, अनुभाग अधिकारी (भं0 एवं क0) के रूप में

भावपूर्ण बधाई!

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