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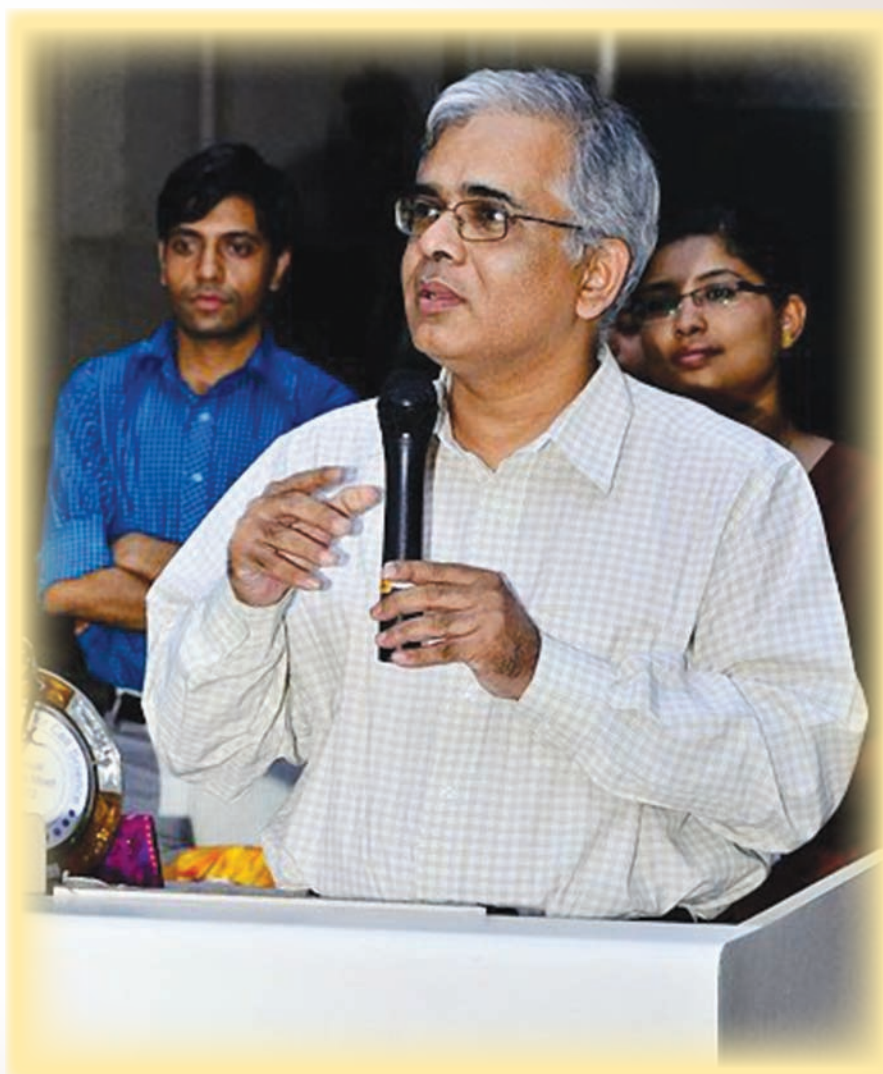
In The News

Dr. Shekhar C. Mande

Takes over as Director-General of CSIR Family

STRUCTURAL and computational biologist and Director of the Pune-based National Centre for Cell Science (NCCS), Dr. Shekhar C. Mande has been appointed as the Director-General of the Council of Scientific and Industrial Research (CSIR) and Secretary of the Department of Scientific and Research (DSIR). One of India's leading experts in DNA fingerprinting and diagnostics, Dr. Mande assumed the charge on 16 October 2018.

As Director of the National Centre for Cell Science (NCCS), an autonomous Institute of the Department of Biotechnology, Government of India, Dr. Shekhar Mande oversaw the launch of the Indian Human Microbiome Initiative in the Northeast. The project aims to sample 20,000 ethnically diverse Indians from the region for their bodily bacteria from stool, skin, and saliva. This data will provide insight into the varying bacterial colonies in human bodies according to ethnicity and lifestyle. Apart from understanding health and disease in the population, the bacterial samples will also be useful for



Structural and computational biologist, Dr. Shekhar C. Mande, who has taken over as the Director General of the Council of Scientific and Industrial Research, is also one of India's leading experts in DNA fingerprinting and diagnostics.

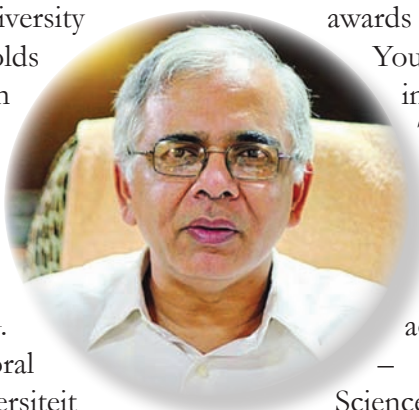


potentially extracting new drugs to treat illnesses.

His laboratory at NCCS has been involved in research on the structural characterisation of *Mycobacterium tuberculosis* proteins and the computational analysis of genome-wide protein: protein interactions.

Dr. Shekhar Mande did his M.Sc. in Physics from University of Nagpur and holds a doctoral degree in Molecular Biophysics from the Indian Institute of Science (IISc), Bengaluru. Following his PhD, he joined Prof. Wim G. J. Hol as Post Doctoral Fellow at Rijksuniversiteit Groningen in the Netherlands in 1991 and in 1992 joined as a senior fellow at the University of Washington, Seattle, USA.

On his return to India, Dr. Shekhar Mande joined the CSIR-Institute of Microbial Technology, Chandigarh, as a scientist and in 2001 was selected as a Staff Scientist at the Centre for DNA Fingerprinting and Diagnostics, Hyderabad. In 2011, Dr Mande was appointed as the Director of NCCS,



Pune. Dr. Mande has served in various advisory committees for the Government of India.

In 2005, he was awarded the Shanti Swarup Bhatnagar Prize for Science and Technology – the most prestigious science award in India – in the category of Biological Sciences. He has been honoured with several other prestigious awards including the B M Birla Young Scientist Award in 1999, and Wellcome Trust International Senior Fellow 2003-08.

He has been elected Fellow of all the three major science academies in the country – the Indian National Science Academy (INSA),

National Academy of Sciences, India (NASI), and the Indian Academy of Sciences (IAS). He is also Life member of the Indian Crystallographic Association, the Indian Science Congress Association and the Indian Biophysical Society. Dr. Mande is also credited with the BC Guha Memorial Lecture of the Indian National Science Academy, 2017 and the BK Bachhawat Memorial Lecture of the National Academy of Sciences, India, 2017.

Events

International Science Literature and Film Festival

“Coordinated by CSIR-National Institute of Science Communication and Information Resources (NISCAIR) and Vigyan Prasar as a part of IISF 2018”



Science films and science literature play a very important role in science communication, said Dr. Harsh Vardhan, Hon'ble Minister of Science & Technology, Earth Sciences and Environment, Forest & Climate Change. He also added that he dreamt of the day when science films would be the first choice of entertainment of the people. Dr. Harsh Vardhan was speaking at the conclusion of the International Science Literature and Film Festival (ISLFF) held at the Shri Atal Bihari Vajpayee Scientific Convention Centre, Lucknow during 6-8 October 2018.

Organised by the Ministry of Science and Technology, Ministry of Earth Sciences, Department of Biotechnology, and Vijnana Bharathi, the International Science Literature and Film Festival was coordinated by CSIR-National Institute of Science Communication and Information Resources (CSIR-NISCAIR) and Vigyan Prasar as a part of the 4th India International Science Festival.

The three-day event had an interesting mix of sessions that included panel discussions on science literature and science films; workshops on filmmaking, communicating science to the public, and visualising and designing science cartoons; interactions with authors and filmmakers; screening of science films, and an International Science Book Fair.



Dr. Harsh Vardhan, Hon'ble Minister of Science & Technology, Earth Sciences and Environment, Forest & Climate Change addressing the gathering at the concluding function of the ISLFF at Lucknow



Shri Baldeo Bhai Sharma, Chairman, National Book Trust, India visiting the International Science Book Fair accompanied by Dr. Manoj Kumar Patariya, Director, CSIR-NISCAIR



Dignitaries inaugurating the ISLFF (from right): Dr. M. Rajeevan, Secretary, Ministry of Earth Sciences; Dr. Manoj Kumar Patairiya, Director, CSIR-NISCAIR; Dr. N.K. Sehgal, Kalinga Prize Winner; Shri Baldeo Bhai Sharma, Chairman, NBT, and Dr. Jayant Sahasrabuddhe, Organising Secretary, Vibha

Inaugural Function

The event was inaugurated on 6 October 2018 by Prof. Baldeo Bhai Sharma, Chairman, National Book Trust. In his inaugural address, Prof. Sharma said that science is an important part of human life and it is essential to connect science to the masses. He said that events such as the IISF play an important role in spreading awareness about science to the general public.

Dr. M. Rajeevan, Secretary to the Ministry of Earth Sciences, in his address mentioned that the country is doing very good science but the same is not being communicated effectively to the masses. The recent initiatives of the Ministry of Earth Sciences

and the Department of Science and Technology to promote science communication are expected to connect science with the masses, he added.

Speaking at the inaugural function, Kalinga Prize Winner and noted science communicator, Dr. Narender K. Sehgal said that there is an urgent need for embarking on large-scale translations of Indian scientific content from one Indian language to another. He said that Indian languages should also be the language of science in the country.

Prof. Shambhu Nath Singh, Director, School of Journalism and New Media Studies, IGNOU, said that simple applications of science should be imbibed in our daily lives. He added that IISF has emerged as a platform for close interaction among the many scientific community stakeholders including the general public.

Shri Jayant Sahasrabuddhe, Organising Secretary, Vignana Bharathi and Chair of the inaugural session said that the India International Science Festival has grown from strength to strength ever since its first edition was held in Delhi. He mentioned that the current fourth edition of IISF has many new initiatives and the International Science Literature and Film Festival that is being held for the first time has evinced wide interest and has drawn a very good response.

Earlier, welcoming the invitees and delegates, Prof. Manoj Kumar Patairiya, Director, CSIR-National Institute of Science Communication and Information Resources (NISCAIR) said that the International Science Literature



Dr. Manoj Kumar Patairiya, Director, CSIR-NISCAIR, addresses the gathering during the inaugural function

and Film Festival of IISF brings together not only scientists and science communicators, but also the literary experts, artists, cartoonists, folklore practitioners, and others on the same platform for the cause of furthering science communication.

Two short films, *CSIR Stands with the People in Distress* and *Ganga Hritima Abhiyaan: Ek Vyakti-Ek Vriksh* were screened as part of the inaugural function. The audience also witnessed an enthralling Mohiniyattam performance of India's space odyssey — *Chandrayannam*.

Dr. T.V. Venkateshwaran, Director, Vigyan Prasar proposed the vote of thanks.

Panel Discussion

The panel discussion on 'Contemporary Science Literature: An Assessment' was chaired by Prof. K.K. Dwivedi, Vice-Chancellor, ITM University and Prof. Sun-Kyum Cho, Chugam National University, Republic of Korea. In his opening remarks, Prof. Dwivedi said that media coverage of science is just 2%-3% and the scientific literature is not reaching the public.

Shri Rajesh Badal, Former Executive Director, Rajya Sabha TV (RSTV)

said that the media institutes in the country should pay attention to science communication.

Prof. Sai Baba, T.V. Raman Pai Chair Professor, National Institute of Advanced Studies (NIAS), Bengaluru, informed that more transparency is being sought in the peer-to-peer communication in science. He stated that social media is an effective tool for peer-to-public communication and also that science communicators need to write lot more about technologies that have impact on the society.

Shri Sanjiv Goswami, Managing Director, Springer Nature, India, articulated the need for establishing a good digital fulcrum for exposing science in India.

Mr Arvind Mishra, Secretary, Indian Science Writers' Association remarked that the science literary content has not been given importance in India. He said that science fiction writers have some kind of prophetic vision which can be interesting and so there is a need to promote science fiction writers especially those writing in Indian languages.

Prof. Afrina Rizvi from the Department of Mass Communication,



Shri Rajesh Badal, Former Executive Director, Rajya Sabha TV (RSTV) addresses during the Panel Discussion. On the dais from right: Prof. Sai Baba, T.V. Raman Pai Chair Professor, National Institute of Advanced Studies (NIAS), Bengaluru; Shri Sanjiv Goswami, Managing Director, Springer Nature, India; Dr. C.M. Nautiyal, Science Communication Consultant at Indian National Science Academy (INSA); Prof. K.K. Dwivedi, Vice-Chancellor, ITM University; Prof. Sun-Kyum Cho, Chungam National University, Republic of Korea; Dr. Jagdish Chander, DST; Dr. Anil Saumitra of Atal Bihari Vajpayee Hindi Viswavidyalaya; Prof. Afrina Rizvi from the Department of Mass Communication, Aligarh Muslim University

In his closing remarks to the Panel Discussion, Prof. Sung-Kyum Cho, Chungam National University, Republic of Korea, concluded that the power of the popular media needs to be exploited for science communication.

Aligarh Muslim University, was of the view that not many science fiction films are being made in India. Prof. Rizvi said that there is a need to celebrate Indian science and scientists through popular media like films and science fiction.

Dr. C.M. Nautiyal, Science Communication Consultant at Indian National Science Academy (INSA) also reiterated that Indian success stories of science need to be communicated widely and science fiction in one Indian language should be translated into other languages. Dr. Anil Saumitra of Atal Bihari Vajpayee Hindi Vishwavidyalaya highlighted that there is a mismatch in the quantum of scientific research literature and popular science literature.

In his closing remarks to the Panel Discussion, Prof. Sung-Kyum Cho, Chungam National University, Republic of Korea, concluded that the power of the popular media needs to be exploited for science communication. Prof. Cho also added that good science fiction is not only important for science communication but for the discipline of science at large.

Vigyan Sahitya Charcha

The session on interaction with science authors and poets was chaired by Prof. Gabriel Gomez, Professor, Chicago State University and Dr. D.C. Goswami, noted science communicator from Assam. In his opening remarks, Prof. Gabriel Gomez stated that social media is by and large considered only as a communication tool but is also an important information dissemination medium too.

Addressing challenges of science communication among children, Dr. Madhu Pant, former Director, Bal Bhawan, New Delhi, stated that posters and poems are effective ways of communicating science to children. She added that talking directly to children on matters of science and environment was more effective than indirect communication methods.

The emphasis on accuracy in science communication was highlighted by Dr. D.C. Goswami, the noted science communicator from Assam. He reiterated that in our focus to communicate science attractively, we should not overlook accuracy.



Dr. Madhu Pant, former Director, Bal Bhawan, New Delhi, presents her point of view. On the dais from right: Shri. C.P. Patsariya, Science Poet; Prof. Gabriel Gomez, Professor, Chicago State University; Dr. D.C. Goswami, noted science communicator from Assam; Dr. Anil Kumar Rai, Professor & Head, Department of Mass Communication, Mahatma Gandhi Antrarashtriya Hindi Vishwavidyalaya, Wardha, Maharashtra; Dr. Oum Prakash Sharma, Deputy Director, National Centre for Innovation in Distance Education, Indira Gandhi National Open University (IGNOU); Shri Kollegala Sharma, Senior Principal Scientist, CSIR-CFTRI, Mysore

Dr. Oum Prakash Sharma, Deputy Director, National Centre for Innovation in Distance Education, Indira Gandhi National Open University (IGNOU) shared his experiences of bringing out a Hindi popular science quarterly magazine called *Vigyan Aap Ke Liye*. Lack of good articles in Hindi language remained a major challenge, he said. Noted science poet, Shri. C.P. Patsariya shared his poem on plastic and plastic pollution. He also sang a song penned by him on food adulteration.

Shri Kollegala Sharma, Senior Principal Scientist, CSIR-CFTRI, Mysore, said that there are many cost-effective ways and means to communicate science to targeted audiences, especially children. He added that children should be made to understand about scientific occurrences happening around them. He shared his experience of cost-effective and focussed science communication using podcasts.

Workshop on Communicating Research to the Public

Dr. Kanan Purkayastha, Environment Advisor, Climate Reality Leader, University teacher and science writer from London chaired the workshop on communicating research to the public. Dr. Purkayastha began by explaining the importance of communicating science as having utilitarian, economic, cultural, democratic and social imperatives. Sharing the situation in the UK, Dr. Purkayastha said that there are unwritten rules for science communication in the UK. Apparently, no public science communication is usually done before the publication of the work in a research journal. The younger scientists are expected to focus on their research

rather than engaging with the public, he said.

However, in the recent years, there has been a focus to shift from the deficit model to the dialogue model to improve the public understanding of science in the UK. Upstream engagement of the scientist with the public even before setting-up R&D facilities is now being encouraged in the UK. Public benefit of scientific research now needs to be demonstrated, Dr. Purkayastha added.

Dr. Deepika Bhaskar, Centre for Science Education and Communication, University of Delhi, emphasised accuracy, brevity and clarity as the ABC of good science communication. Shri Sanjay Verma, science writer from Gorakhpur said that popular films are the best medium for creating mass appeal of science among the public. Dr. Jagdeep Saxena, Dr. Arvind Dubey and Dr. J. Nanda Kumar were the other speakers at the workshop on communicating research to the public.

Seminar on Innovative Approaches to Science Communication

The seminar on innovative approaches in science communication was chaired by Dr. Gary Kerr, Science Communicator from the Edinburgh Napier University. In his opening remarks, Dr. Kerr spoke about the importance of science festivals and informed about the first International science festival that was held in Edinburgh in 1989. He added that science festivals are unique and as important as other festivals involving arts and culture. Dr. Kerr explained the AEIOU of science festivals which includes Awareness, Entertainment, Interest in science, Opinion shaping and Understanding of science.





Scientoon Workshop and Competition

Science cartoons are an entertaining way of communicating science to the masses. It is possible to convey even complex scientific concepts through imaginative and well caricatured and informative cartoons. This was the essential message of the scientoon workshop organized as part of the ISLFF.

The scientoon workshop was chaired by Prof. Tapas K. Kundu, Director, CSIR-CDRI, Lucknow. In his opening remarks, Prof. Kundu stated that sometime we lose the fun of doing science. And for those who do not go through the practical side of science, scientoons can capture and show the

fun side of science, he added.

The workshop was conducted by noted scientoonist, Dr. Pradeep Kumar Srivastava. Through a presentation of a series of his scientoons, Dr. Srivastava showed how environmental and scientific messages can be easily and effectively communicated through science cartoons. Shri Amritesh Srivastava, Media Manager, Nuclear Power Corporation of India Limited (NPCIL), Mumbai, a

discussant at the workshop shared his experiences on creating one-minutes awareness films on important scientific and environmental topics. Shri Vishal Muliya of Christ College, Rajkot, another discussant at the workshop also narrated his experiences while creating scientoons.

After the conclusion of the workshop, a scientoon competition was held. About 40 students, researchers, and scientists took part in the scientoon competition.

Chaupal — Science through Folklore

In an auditorium packed to capacity, the session through folklore had



Bharatanatyam, Kuchipudi and Thirayottam performances by exponents in these areas of performing arts. The session was chaired by Prof. Alok Dhawan, Director, CSIR-Indian Institute of Toxicology Research (CSIR-IITR) and Dr. Denzil J. Godin, Member of Legislative Assembly, UP. Painting, puppetry, dance, music, poetry, storytelling, etc., are some of the means through which science can reach the masses, said Dr. Godin.

Dr. Padmaja Suresh, noted Bharatanatyam dancer, teacher, researcher, TV host and social worker, ahead of her performance spoke about the science-art connect and said that folk is a precursor to the classical dance form. Ms Abhinaya P. Nagajothy, Delhi-based Kuchipudi exponent and researcher performed the Shiva Tarangam in Kuchipudi. Dr. Govinda Varma Raja, Former Head, Department of Folklore, Calicut University and his

team performed Thirayottam, a ritual performing ethnic art from Kerala.

Summing up and closing

A round table meet on ‘Science Outreach: Looking Ahead’ was held wherein various speakers including Dr. Dinesh Kumar, former Director, Institute of Science & Technology, University of Lucknow, Dr. Sanat Kumar Sharma, B.P. Koirala Memorial Planetarium, Observatory and Science Museum Development Board, Nepal, Dr. V.K. Srivastava, President, Indian Science Writers’ Association and Dr. Yashwant Singh, Associate Professor, Department of Hindi, Manipur University, spoke on the various aspects of science outreach.

The International Science Literature and Film Festival 2018 came to a close with Dr. Harsh Vardhan, Hon’ble Minister of Science & Technology, Earth



Hon’ble Minister Dr. Harsh Vardhan at the concluding session of ISLFF. On the dais (from right): Dr. S.S. Bhaduria, Secretary-General, VIBHA; Dr. Denzil J. Godin, Member of Legislative Assembly, UP; Prof. Shambhu Nath Singh, Director, School of Journalism and New Media Studies, IGNOU, and Dr. Sundeep Sarin, Adviser, Department of Biotechnology



Award winners with Hon'ble Minister Dr. Harsh Vardhan

Sciences and Environment, Forest & Climate Change being the Chief Guest of the session. Expressing satisfaction over the large-scale participation of students, film-makers, fiction writers, teachers, poets, and the general public in the International Science Literature and Film Festival the Hon'ble Minister said that the participation in the India International Science Festival too has been steadily increasing over the years.

Fifty-three national and international science films including Green-Oscar winning films were also screened at the

festival. In the foreign films category, 19 science films were screened from Sweden, Denmark, Netherlands and Britain.

Dr. S.S. Bhaduria, Secretary-General, VIBHA said that unless science is not communicated to the masses, science cannot belong to the masses. He stressed on the need for more and more science films in vernacular languages.

Dr. Harsh Vardhan also gave away awards to the winners of science films and science cartoon competitions.

Earlier, Mr Hasan Jawaid Khan, Chief Scientist and Head, International & Popular Science Division, CSIR-NISCAIR, welcomed everyone to the concluding session and also summed-up the proceedings of the International Science Literature & Film Festival.

Dr. Sundeep Sarin, Adviser, Department of Biotechnology, also spoke at the concluding session. Dr. Jyoti Malik Logani, Scientist, Department of Biotechnology, proposed the vote of thanks.

*Contributed by Dr. G. Mahesh,
Senior Principal Scientist,
CSIR-NISCAIR*



Pre-IISF Science Outreach Programme Organised at CSIR-NCL



Prof. Jayant Udgaonkar, Director, Indian Institute of Science Education and Research, Pune giving the talk



Prof. Ashwini Kumar Nangia, Director, CSIR-NCL felicitated Prof. Udgaonkar

CSIR-National Chemical Laboratory (CSIR-NCL), Pune, organised a Science Outreach Programme, a curtain raiser of the India International Science Festival 2018 in collaboration with Vijnana Bharati, Pune. On the occasion a Distinguished Public Lecture was delivered by Prof. Jayant Udgaonkar, Director, Indian Institute of Science Education and Research, Pune, on the topic “The Self-packing protein puzzle: How do proteins fold and unfold”.

Prof. Jayant Udgaonkar introduced the field of protein folding to the audiences. He said that the proteins are the workhorses of our cells; they carry out every possible function we can think of, in terms of what the body of any organism can achieve. They can transform one part of the body to another part of the body; they also have a role in our immune response whenever we fall sick. All the enzymatic reactions are carried out by proteins. Proteins are able to carry out the specific tasks because they have very specific structures. In the enzymatic

reactions the position of the atoms are so important that if the atoms are displaced by even fractions the activity of the enzyme can fall down drastically.

Prof. Udgaonkar highlighted that the proteins can be small and large as well, giving an example of a large protein and its synthesis. The polypeptide chains are synthesized by the ribosome machine. It is a large macromolecular assembly containing three large ribonucleic acid molecules and more than fifty proteins. He said that the proteins are polymer chains that have very well defined structures. He threw light on two serine proteins namely chymotrypsin and subtilisin, both have very dissimilar structures but nearly similar active sites.

Prof. Udgaonkar gave importance to the protein folding problems talking about the challenges for both the experimental and theoretical studies. The problem has been studied by many scientists over the last few decades by both experimentalists and theorists. It's been a fascinating problem in which scientists have still not been to predict

Prof. Udgaonkar highlighted that the proteins can be small and large as well, giving an example of a large protein and its synthesis. The polypeptide chains are synthesized by the ribosome machine.



Awardees felicitated at the function for contributions to societal and rural development

Prof. Udgaonkar talked about the principle of the Ramachandran plot expressing the hierarchical organisation of structure in proteins.

how the protein will fold operating the amino acids. He emphasised why it is difficult to study protein folding – the unfolded form is highly heterogeneous. He talked about theoretical solutions, phenomenological approaches and ab-initio and computational methods.

Prof. Udgaonkar talked about the principle of the Ramachandran plot expressing the hierarchical organisation of structure in proteins. He explained the free energy landscape of folding. He also underlined some of the important questions in the field of protein folding looking forward in the future.

Earlier, Prof. Ashwini Kumar Nangia, Director, CSIR-NCL delivered the welcome remarks and Dr. Shubhangi Umbarkar introduced the speaker.

On the occasion people from different walks of life who have immensely contributed to social and rural development were felicitated. The awards were given under different categories such as, Grass Root Innovator, Science Teacher, Student, Science Journalist, NGO in Science Popularization, Science Publisher, Science for Society and Science Education.

IISF 2018 Precursor Events at CSIR-CBRI

CSIR-Central Building Research Institute, Roorkee, organised a public outreach programme for school children, college students, teachers, industry personnel, media and public as a precursor event of the 4th India International Science Festival (IISF-2018) during 27-28 September 2018 at CSIR-CBRI, Roorkee.

In his opening remarks, Dr. A.K. Minocha, Chief Scientist, CSIR-CBRI, informed that the 4th India International Science Festival (IISF-2018) is being organised at Indira Gandhi Pratishthan, Lucknow, during 5-8 October 2018. He informed that IISF is a flagship programme of Ministry of Science and Technology and Ministry of Earth



Sciences, organised in association with Vijnana Bharati (VIBHA).

Dr. Mahesh Bhatt, President, VIBHA Dehradun Region, Uttarakhand, gave a lecture on “IISF-2018” and informed that with the theme “Science for Transformation” the IISF 2018 aims to provide a platform to young students, scientists and technocrats from across India for exchange of knowledge & ideas with emphasis on the role of science for masses and science for society. He also informed about the various programmes being scheduled as a part of IISF 2018.

Dr. Atul Kumar Agarwal, Senior Principal Scientist and Nodal Officer, CSIR-CBRI, Roorkee, motivated the students with a lecture on “Youth for Science: Scientific Careers”. He encouraged the students to adopt a scientific approach to questioning and interactions, as this curious outlook towards life leads to creativity and



innovation. He informed that CSIR also provides a wide window of opportunities in all the fields in all the areas of life.

In the afternoon session, Dr. Agarwal gave a lecture on “Scientific Temper: Quality Education & Fight against Superstitions”.

He said that education should be such which forms character, increases the strength of mind, expands intellect, and enables one to stand on one’s own feet. It should remove any misconception, myths and superstitions and provide us with the

strength to face the world, free of superstitions. In his talk, he informed how starting with the indelible ink, the hallmark of the nation’s fabric, CSIR has left an indelible mark on every sphere of life.

Dr. R.D. Dwivedi, Principal Scientist, CSIR-CIMFR Regional





Centre, CBRI Campus, Roorkee, gave an interesting lecture on “Tunneling Engineering” and informed about the importance of tunnels, their excavation process, equipment used, construction challenges and the key safety features during the process.



The participants visited the Institute’s labs such as Rural Park, Efficiency in Buildings, Fire Research and Environment Science and Technology-Clay Products, etc. and learnt about the latest developments and technologies. Science films featuring CSIR, CBRI and VIBHA scientific innovations and success stories were also screened. They also had an interactive session with the Institute’s scientists where they put their curiosity to rest and quenched their thirst for knowledge. The programmes got positive feedback from the participants and were defined as motivating, inspiring and interesting.



The programme was attended by about 400 students along with their faculty from various schools and colleges including Children’s Senior Academy, Mahavir International School, Methodist Girls (PG) College, New Era Public School, College of Advanced Technology, Motherhood University and Kendriya Vidyalaya No. 1, Hathibarkala Dehradun.

As a prelude to the event, a Press Meet was organised on 27 September 2018, to apprise the public about



the forthcoming event. Dr. A.K. Minocha, Chief Scientist chaired the press meet and Dr. Atul Kumar Agarwal briefed about the programme. Dr. S. Sarkar, Chief Scientist, on behalf of Dr. N. Gopalakrishnan, Director, CSIR-CBRI, Roorkee, invited everyone to take part in IISF 2018 and also participate in the precursor events being organised at CSIR-CBRI, Roorkee.

Press Representatives from *Amar Ujala*, *Dainik Jagran*, *Hindustan, Rashtriya Sahara*, *Dainik Aaj*, *Dainik Bhaskar*, *Dainik Hawk*, *Punjab Kesari*, *Ajit Samachar*, *Uttar Bharat Live*, *Swatantra*



Chetna, *Golden Times* and *Badri Vishal*, etc. attended the meet. It was well disseminated by the newspapers.

76th CSIR Foundation Day

CSIR-National Chemical Laboratory (CSIR-NCL), Pune

CSIR-National Chemical Laboratory (CSIR-NCL), Pune, celebrated the 76th Foundation Day of Council of Scientific and Industrial Research (CSIR) on 28 September 2018. On the occasion a CSIR Foundation Day Lecture was given by Dr. Vijay Kumar Saraswat, Hon'ble Member, NITI Aayog, Govt. of India on the topic "Strategy for Transforming India into Innovation Society".

Dr. Vijay Kumar Saraswat initiated his talk focusing on how we can transform our country into an innovation society. He said that the decade 2010 to 2020 has been declared as an innovation decade for the country. Science is a tool for society's problem-solving. The objective of carrying out science is to understand the nature and the universe; and to improve the lives, health and freedom of the common people. It comprised



Dr. Vijay Kumar Saraswat, Hon'ble Member, NITI Aayog, Govt. of India while delivering the CSIR Foundation Day Lecture at CSIR-NCL

the basic and applied research – when combined it is called the inspired basic research. Unless we direct our research towards the society's need, it becomes



Prof. Ashwini Kumar Nangia, Director, CSIR-NCL felicitating Dr. Saraswat

“It is only innovation that extends the creativity to implementation and generation of value,” said Dr. Saraswat.

irrelevant. Science is to be in league with the societal requirement. He said that all investments, policies and utilisation of available resources and sustainable development form part of the triad to create a knowledge-based society.

Dr. Saraswat talked about the history of technologies through ages throwing light upon different ages such as Stone Age, Bronze Age, Iron Age, Chemical Age, Plastics and Nuclear Age up to 21st century’s Nanotechnology Age. He said, “It is only innovation that extends the creativity to implementation and generation of value.” Countries understand that innovation is fundamental to economic well being and are finding new ways to advance their innovation growth.

Dr. Saraswat expressed his views on systematic approach to innovation. The output of the innovation can be correlated in terms of economic growth. Innovation can be disruptive like the Internet. He informed about seven interlinked innovation areas such as business, organisational process, technology, marketing and product innovation. He discussed the innovation

model for wealth creation and social well being. He also focused on different barriers to innovations that include lack of knowledge, access to the capital, cultural changes and language barriers. The market has become a barrier as identifying and understanding the opportunities is difficult.

Dr. Saraswat talked about the Science-based Innovation and Engineering based Innovation. Government action becomes a catalyst for accelerating learning

by creating massive local demand and instituting regulations that require technology transfer. Science-based innovation is being carried out in public laboratories and academic research labs. Engineering-based innovation is driven by technology partners. Customer-focused innovation is driven by consumer needs.

Dr. Saraswat talked about the institutional components of an Innovation Ecosystem. He discussed the role of the government saying that the government must dominate certain sectors, protecting and insulating those areas thought to be drivers of future growth. He shared views on the new innovation ecosystem comprising the public and private sectors. He expressed views on design thinking and its framework; design thinking is at the core of effective strategy development and organisational change. It can be applied to products, services, processes anything that needs to be optimised for human interaction. He covered innovative topics like Smart Manufacturing, Cyber Security, Smart Cities to Intelligent Nation.

Earlier, Prof. Ashwini Kumar Nangia, Director, CSIR-NCL, gave the welcome remarks. Dr. Swati Chadha, Hindi Officer, CSIR-NCL, introduced the speaker to the audiences.

Later, council employees who were

retired from CSIR services during the last one year and who have completed 25 years of continued service in CSIR were felicitated at the hands of Dr. Vijay Kumar Saraswat. Meritorious children of staff were also felicitated.



CSIR-Central Building Research Institute (CSIR-CBRI), Roorkee

The 76th CSIR Foundation Day was celebrated with great enthusiasm at CSIR-Central Building Research Institute, Roorkee, on 25 September 2018. Dr. Rajendra Dobhal, Director-General, Uttarakhand State Council for Science & Technology, Dehradun, graced the occasion as Chief Guest and Shri R.K. Srivastava, Executive Director, NETRA, NTPC, New Delhi was the Guest of Honour. Dr. N. Gopalakrishnan, Director, CSIR-CBRI, Roorkee, presided over the function.

Addressing the gathering, Dr. Rajendra Dobhal stressed that for the development of a strong and technologically empowered nation, there is dire need of sincere, goal-oriented and time-managed research for

the development of new and innovative technologies. Also, these research and development works should receive proper federal funding and support for better output.

Shri. R.K. Srivastava informed about the research conducted jointly by NETRA and CSIR-CBRI to provide innovative outputs such as Geopolymer Roads. He advised CBRI to continue to work along with NETRA in the area of pollution control by developing low-cost advanced building materials from industrial by-products such as gypsum.

In his Presidential address, Dr. N. Gopalakrishnan congratulated and thanked all the members of the CSIR family who have been a part of the glorious scientific journey of CSIR,

Dr. Rajendra Dobhal stressed that for the development of a strong and technologically empowered nation, there is dire need of sincere, goal-oriented and time-managed research for the development of new and innovative technologies.



Dr. Rajendra Dobhal (right), Director-General, Uttarakhand State Council for Science & Technology, Dehradun, and Shri R.K. Srivastava (left), Executive Director, NETRA, NTPC



and turned the challenges on the road into opportunities and achievements, and contributed to the development of the country.

On the occasion, two Institute publications titled “*Confined Masonry*” and “*Structural Designs*



and Detailing for Confined Masonry EWS Houses” were released.

Dr. A.K. Minocha, Chief Scientist, conducted the function and presented the formal introduction of the Chief Guest. Dr. Suvir Singh, Chief Scientist, presented the formal introduction of the Guest of Honour and proposed the vote of thanks.

As an important part of the day, the laboratories of CSIR-CBRI, Roorkee, were open to the students and the general public from 9:00 AM, giving everyone the opportunity to become familiar with the R&D work of the institute and get the opportunity to interact with the scientists.





The CSIR-CBRI, Roorkee, staff members who completed twenty-five years' service in CSIR were felicitated on the occasion. On the occasion, painting and essay competitions were organised for the children of CSIR-CBRI staff. The winners were also felicitated at the function.

The superannuated staff of the institute, over 100 students from Kendriya Vidyalaya No. 1, Roorkee, and Kendriya Vidyalaya No. 2, Roorkee, along with their faculty also graced the occasion besides other dignitaries.



HUMAN RESOURCE DEVELOPMENT GROUP

CSIR Complex, Library Avenue
Pusa, New Delhi 110 012

CSIR Young Scientist Awards 2019

The Council of Scientific & Industrial Research (CSIR) invites nominations for CSIR Young Scientist (YS) Awards for the year 2019. The awards are to be given for research contributions made primarily in India. The nominee should be a regular Scientist (as per CSRAP Rules) of CSIR system and should have joined the CSIR laboratory on or prior to 26 September 2018. The age of the nominee should not be **more than 35 years as on 26 September 2018**.

The YS Awards are given annually in the following disciplines: (1) Biological Sciences, (2) Chemical Sciences, (3) Earth, Atmosphere, Ocean and Planetary Sciences, (4) Engineering Sciences, and (5) Physical Sciences (including instrumentation). The YS Award comprises a citation, a cash award of Rs 50,000 (Rupees fifty thousand only), and a plaque.

Nominations addressed to **Scientist Incharge, SSB YSA Unit, Human Resource Development (HRD) Group, CSIR Complex, Library Avenue, Pusa, New Delhi 110 012** should be sent as per the prescribed proforma (original + one copy) latest by **31 January 2019**. A CD/DVD/USB flash drive is also required containing duly filled proforma, significant publications (in PDF format) and photograph (in JPEG format) of the nominee.

The details of the YS Award and the prescribed proforma for nomination may be obtained from the above address or may also be downloaded from the **website: www.csirhrdg.res.in**

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