



# Advances in Polymer Science

Organized by SPSI, Pune Chapter

Hosted by: Polymer Science and Engineering Division,  
CSIR-NCL, Pune on 7<sup>th</sup> and 8<sup>th</sup> June, 2019.



To foster exchange of ideas among eminent scientists and young researchers from across India working in the area of the polymers, SPSI-Pune Chapter in association with Polymer Science and Engineering Division, CSIR-NCL organized two symposium. The symposium titled “Advance in Polymer Science (APS)” was held on 7<sup>th</sup> and 8<sup>th</sup> June, 2019 in CSIR-NCL, Pune. Eminent practicing polymer researchers from across the country were invited and a total of 12 lectures, spanned over two days, were delivered. The symposium was attended by academic and industrial participants in large numbers and 205 participants took active part in the symposium. The symposium coincided with the retirement of three scientists from the Polymer Science and Engineering Division, CSIR-NCL, who have significantly contributed to polymers. There would not have been any better occasion than this to recognise their contribution. Therefore, a dedicated felicitation function to honor and felicitate Dr. P. P. Wadgaonkar, Dr. M. V. Badiger and Dr. V. Garnaik was held in the evening of 7<sup>th</sup> June 2019, after the conference hours.

**Dr. P. P. Wadgaonkar**



**Dr. V. Garnaik**



**Dr. M. V. Badiger**



Dr. S. P Chavan, acting director, CSIR-NCL Pune opened the symposium. Dr. Kharul, Chair, Polymer Science and Engineering Division, CSIR-NCL greeted the participants and extended a warm welcome to NCL. The chair in his opening remarks shed light on the contribution of Dr. P.P. Wadgaonkar, Dr. B. Garnaik and Dr. M.V. Badiger to CSIR-NCL in general and to the division, in particular. After opening remarks, Dr. Guruswamy chaired the scientific session

and invited Prof. S. Ramakrishnan, IISc Bangalore, who also happens to be the president of



**Prof. S. Ramakrishnan**

SPSI, to deliver the first lecture of the symposium. Prof. Ramakrishnan revealed that he had heard about Dr. Wadgaonkar even before he started his independent career and how the chemistry pursued by Dr. Wadgaonkar influenced his independent research. Prof. Ramakrishnan spoke about functional hyperbranched polymers. He concluded his lecture

by applauding the contribution of the three superannuating scientist from NCL and how they have influenced his scientific journey.

The next speaker was Prof. Nikhil Singha from IIT-Kharagpur. He spoke about the synthesis of smart polymer materials using click chemistry. The symposium also featured speakers from Industry. Dr. Rahul Shingate from Solvay, Baroda was the 3<sup>rd</sup> speaker and presented the contribution of Solvay to specialty polymers for realizing a sustainability dream. He spoke about Solvay's contribution to "Solar Impulse", a zero emission aircraft, exclusively powered by solar energy. He argued that "Solar Impulse" will be subjected to technological advancements and will be a reality on one fine day. The second session on the first day began with a lecture by Prof. Tushar Jana from university of Hyderabad. Prof. Jana presented his work on polymer chain *grafted* core-shell particles and their synthesis and applications. This was followed by an impressive lecture by Prof. Sayam Sen Gupta, IISER-Kolkata. Prof. Sen Gupta cherished his memories and his time at NCL. He spoke about cellular uptake of mannose-6-phosphate modified glycopolypeptides and their self-assembled nanostructures. Prof. Vimal Katiyar from IIT-Guwahati discussed the efficacy of cellulose nanocrystals in the development of targeted sustainable chemical processes. He highlighted his contacts with the three superannuating scientist and how they shaped his career. The last speaker on Day-1 was Prof. Tarun Mandal from Indian Association for the Cultivation of Science (IACS), Kolkata. Prof. Mandal delivered a lecture on stimuli-responsive amphiphilic poly(2-oxazoline) copolymer assemblies.

After the hectic scientific deliberations, a felicitation function was organised at NCL guest house lawns to felicitate Drs. Wadgaonkar, Badiger and Garnaik. Dr. Sivaram, former director of CSIR-NCL, who also happens to be the former chair of the division, opened the function with his remarks and felicitated the three. On this occasion, former students, present

and former colleagues of Drs. Wadgaonkar, Badiger and Garnaik offered their remarks. Finally, Dr. Wadgaonkar, Dr. Badiger and Dr. Garnaik addressed the gathering.

Day 2 opened with an industrial lecture, Dr. Pramod Kumbhar representing Praj Industries Ltd. delivered the first lecture. Dr. Kumbhar illustrated the significance of biopolymers in our daily life. His lecture was centred around biodegradable polymers such as PHAs and argued about the future of polymers from a sustainable perspective. Dr. Debasis Samanta from CLRI Chennai delivered the second lecture on the immobilization of polymers on glass, leather and leather-like materials. Dr. Sushilkumar Jadhav (Shivaji University, Kolhapur) presented his work on thermoresponsive polymer grafted magnetic mesoporous silica nanoparticles as smart pharmaceutical nanocarriers. Prof. M. Jayakannan from IISER-Pune discussed about L-amino acid based polymer platform for biomaterial research. Prof. S. Zade from IISER Kolkata delivered the last lecture. He spoke about azulene and thiophene-based conjugated systems. Dr. Samir Chikkali presented vote of thanks and the symposium closed with a photograph.



**APS-2019, CSIR-NCL, Pune**