

School on Advanced Oxidation Processes (S-AOP) held at BITS Pilani

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Vasco: BITS Pilani, K K Birla Goa Campus in association with the Society of Environmental Chemistry and Allied Sciences (SECAS), organised a School on Advanced Oxidation Processes (S-AOP) at its premises at Zuarinagar.

Several young investigators working in the area of AOPs from IIT, Madras and Hyderabad, IISc Bengaluru, NIT Raipur, ICT Mumbai, Mahatma Gandhi University, Kerala and BITS Pilani, presented their latest research findings. Also, representatives from industries such as Aditya Birla Group, Mumbai; Deccan Chemical, Goa; Goa State Infrastructure Development Corporation (GSIDC), Goa; participated in S-AOP.

Prof Subrahmanyam, IIT Hyderabad, delivered lectures on fundamentals and application of plasma methods for AOPs developed at IITH. Prof Ligy Philip, IIT Mumbai conducted a session pulsed power technologies in water treatment, and some of AOP modules



Participants at SAOP 2018 held at BITS-Pilani, Zuarinagar, Vasco

developed at IITM. Prof Parag Gogate, ICT, Mumbai delivered lectures on application of Ultrasonic AOP technologies to address the complex wastewater problems.

In the young investigators sessions, Bhanupriya, IISc Bengaluru; Jeeva Philip, M G University, Kerala and Aswath A K Aditya Birla Science and Technology Company Ltd, Mumbai won the best presentation awards for their work on screening, and removal of pollutants in complex water matrices.

In his opening remarks, Prof Halan Prakash, BITS Pilani K K Birla Goa Campus, Convener of

S-AOP-2018, said that the intent of S-AOP was to expose the young Research Scholar to advanced topics on the Sources, Migration and Fate of CECs in the environment, treatment of CECs by latest AOPs, and provide a platform for the students to directly interact with experts from different higher educational institutes and industries. During his inaugural address to the audience, Prof. Raghurama, Director BITS Pilani, K K Birla Goa Campus, mentioned the need for interdisciplinary approach to solve the complex pollution issues, and higher education institute have a major responsibility to have such schools

and bring students, faculty from various discipline and industrial professional together for effective deliberations and training of young students.

S-AOP-2018 deliberation was programmed to be highly interdisciplinary. S-AOP was participated by Chemists, Physicists, Biologists, Environmental Scientists and Engineers, to discuss potential avenues in chemical and biological oxidative decomposition pathways of organic and inorganic contaminants in water. S-AOP also coordinated discussion on efficiency of various AOPs in the degradation of pollutants, and in fundamental understand-

ing of degradation mechanisms.

Today, Scientists have detected many persistent organic pollutants such as pharmaceuticals, personal care products, surfactants from soap, laundry waste chemicals, oil wastes from vehicles, pesticides, insecticides and other chemicals in water bodies. These groups of chemicals are considered as Contaminants of Emerging Concerns (CECs). CECs are predominantly non-biodegradable in nature, and can easily escape biological wastewater treatment processes commonly employed by all municipal bodies. Hence, CECs are high risk chemicals that could enter into food chain, deteriorate the quality of water and environment with toxic effects.

Advanced Oxidation Processes (AOPs) are chemical based emerging technologies for removal of organic pollutants, including CECs in water, soil and air. These processes primarily involve generation of highly reactive hydroxyl radical for treatment of contaminants.