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Obituary

In Memoriam: Dang Sheng Su (1961–2019)

Professor Dang Sheng Su passed away on June 22, 2019 at the age of only 58 years with a great loss for all the communities of catalysis, carbon materials and electron microscopy. He pioneered the study of metal-free nanocarbon as high-performance catalysts and electrocatalysts, providing great advances in understanding the reaction mechanism and the nature of the active sites. He also largely contributed to the advances in characterization of nanomaterials by electron microscopy methods.

He was born on July 1st, 1961, first obtaining the Bachelor and Master degree in physics at the Jilin University (China), then moving to the Technical University of Vienna (Austria) where obtained his PhD in 1991. He then joined the Fritz Haber Institute (FHI) of the Max Planck Society in Berlin, Germany, as a post-doctoral fellow in the Department of Electron Microscopy. After a short stay at the Hahn Meitner Institute GmbH and the Humboldt University (Berlin, Germany), he re-joined the FHI in 1999, where he investigated nanomaterials in heterogeneous catalysis and energy storage until 2011, working in close collaboration with Robert Schlögl and becoming Head of the laboratory of electron microscopy. He then transferred back to China taking a position of Professor and Head of the Catalysis and Materials Division of the Shenyang National Laboratory for Materials Science - SYNL (at Institute of Metal Research of the Chinese Academy of Sciences). Finally, he transferred about two years ago to the Dalian Institute of Chemical Physics-DICP (Chinese Academy of Sciences) becoming Professor in Physical Chemistry.

Prof. Su carried out seminal work in catalysis by metal-free nanocarbons and in the characterization of nanocatalysts by electron microscopy. He developed highly active metal-free nanocarbons for dehydrogenation and oxidative dehydrogenation of hydrocarbon, then extended research interest to the use of these novel catalysts to liquid phase reactions, energy storage materials (supercapacitors and batteries) and more recently to electrocatalysis, from oxygen reduction reaction (ORR) to the conversion of CO_2 and synthesis of ammonia from N_2. He developed new tools to understand the reaction mechanism in these reactions putting on scientific bases the understanding of the crucial effect of doping and control of defects in these materials. One of his last contributions (very recently published) is titled “Surface chemistry of nanocarbon: Characterization strategies from the viewpoint of catalysis and energy conversion” and well summarises his approach which combines rigorous fundamental understanding to industrial practice. It also remarks that notwithstanding the health issues, he continued to work up to the last day publishing about 20 papers of high profile in the first half of 2019, among the over 600 he published in his scientific life obtaining a high number of citations.



He published many relevant reviews, among other, on ACS Catalysis, Chemical Reviews (2), Chemical Society Reviews (2), Accounts of Chemical Research, Angewandte Chemie (2) and ChemSusChem (6). He started important conference series, such as Carbocat, and was member of the editorial boards or associated editors of many journals, from ChemSusChem and ChemCatChem to Journal of Energy Chemistry and Chinese Journal of Catalysis.

Professor Su was a teacher and mentor for many young scientists at FHI, SYNL and DICP and in the catalysis community at-large. He will be remembered as gentle and inspiring scholar willing to share his vision, wisdom and knowledge.

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Gabriele Centi*
University of Messina, Italy

*Corresponding author.
E-mail address: centi@unime.it

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