

Metal (oxy)nitride Functional Materials

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10:30 a.m. - 11:30 a.m., HAMP 2123

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Metal oxynitrides have shown prodigious potential in many fields including photocatalytic water splitting, optical detection and electrochemical applications. This is due to the physical and chemical properties of oxynitrides that can be easily tuned by varying their nitrogen and oxygen contents. Here we present series of our investigations on metal oxynitrides, from crystal structure studies to their applications. The works shown here include the crystal structure and anion ordering studies of metal oxynitrides as well as a simple process for preparing mesoporous transition metal nitrides without the use of nano-patterning or other template. Furthermore, these materials show remarkable properties for the fields of clean energy and sensing applications.

Biography

Dr. YANG Minghui is a professor at Ningbo Institute of Industrial Technology (CNITECH), Chinese Academy of Sciences (CAS). He received B.A. and M.Chem. degrees from University of Liverpool and completed his Ph.D. in Materials Chemistry under the supervision of Professor J. Paul Attfield and Professor Amparo Fuertes at University of Edinburgh in 2010. This was followed by a postdoctoral appointment in the Department of Chemistry and Chemical Biology at Cornell University, working on nano-structured materials for renewable energy with Professor Francis J. DiSalvo at Energy Materials Center at Cornell (EMC²). He received the China National "Thousand Youth Talents" Award for Distinguished Professorship and joined the CAS in 2013 as a group leader for Solid State functional Materials Lab. He has 95 publications including *Nature Chemistry*, *Journal of the American Chemical Society*, *Energy & Environmental Science*, *ACS Nano*, *Chemistry of Materials*, etc.

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