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•EDITORIAL•
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2022 Emerging Investigator Issue of *Science China Chemistry*

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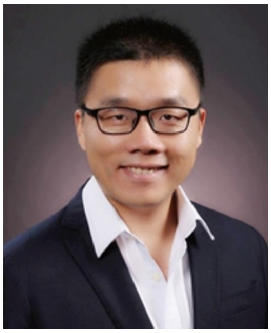
It is always my pleasure to introduce and promote young scientists to the scientific community. To this end, *Science China Chemistry* (SCC) organized special issues for emerging investigators, namely Emerging Investigator Issue [1,2]. Starting from 2020, these issues published innovative research work from young scientists who are at an early stage of their independent research careers. The results in these papers have attracted widespread attention and all authors are highly evaluated by the editorial board.

To extend the success of issues 2020 and 2021, SCC has organized the 2022 Emerging Investigator Issue, contributed by 25 young scientists, all of whom are recommended by SCC Editorial Board and committee of the National Natural Science Foundation of China. The issue covers multiple research fields, including organic synthesis, polymer synthesis, homogeneous and heterogeneous catalysis, porous materials, optoelectronic materials and devices, nanomaterials, and biomaterials, showcasing the talents and potential of a new generation of scientists in pushing forward the development of chemistry and related fields.

Listed below are the profiles of each invited author. On behalf of SCC, I am grateful for their outstanding contributions and wish them continued success in their future careers.

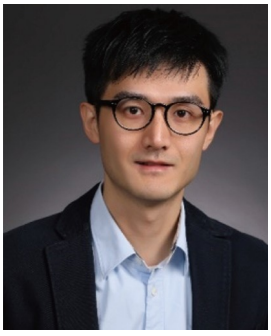
1 Wan LJ. *Sci China Chem*, 2020, 63: 1331–1335
2 Wan LJ. *Sci China Chem*, 2021, 64: 1811–1816



Dr. Qi Chen received his B.S. and M.S. degrees in Tsinghua University, and his Ph.D. degree at University of California, Los Angeles (UCLA). From 2013–2016, he worked as a postdoc fellow at California Nanosystem Institute (CNSI), UCLA. Now he is the professor in Beijing Institute of Technology. His research focuses on hybrid material design, processing, and applications for opto-electronics and for energy harvesting and storage.

Dr. Xu Deng is a professor at the University of Electronic Science and Technology of China. He received his Ph.D. degree in 2013 from the Max Planck Institute for Polymer Research. In 2014, he served as a postdoctoral fellow at UC Berkeley and Lawrence Berkeley National Laboratory. In 2017, he was appointed by the president of Max Planck Institute as the head of the Max Planck Partner Group at UESTC. Dr. Deng is interested in understanding wetting dynamics and physical chemistry at interfaces. In 2021, he was admitted as the Fellow of the Royal Society of Chemistry (FRSC). In 2022, He received the Friedrich Wilhelm Bessel Research Award from Humboldt Foundation.

Dr. Mengning Ding earned his B.S. degree from Nanjing University, received Ph.D. degree from University of Pittsburgh working with Prof. Alexander Star, and worked as a Postdoc Scholar at the University of California, Los Angeles under the supervision of Prof. Xiangfeng Duan and Prof. Yu Huang. He then took a faculty position in the School of Chemistry and Chemical Engineering, Nanjing University in 2017. His current research interest includes on-chip electrochemistry platform, mechanistic and theoretical studies in surface and catalytic chemistry, sustainable electrocatalytic synthesis, and functional devices.

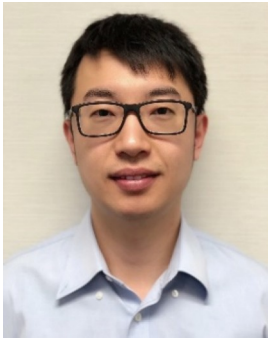


Dr. Haohong Duan is an associate professor at Department of Chemistry, Tsinghua University. He obtained B.S. degree in Peking University in 2009 and Ph.D. degree in Tsinghua University in 2014 (under the supervision of Prof. Yadong Li), and then worked as a postdoctoral associate in University of Oxford in 2015–2018 (working with Profs. Dermot O'Hare and Edman Tsang). He started the independent research career in 2019. He has been working on the development of novel electro- and photoelectro-catalytic systems by coupling hydrogen evolution reaction with value-added anodic reactions, making contribution to the sustainability of co-production of green hydrogen and valuable chemicals driven by renewable energy.

Dr. Jiandong Feng received his B.S. degree in chemistry from Zhejiang University in 2013 and obtained his Ph.D. degree in physics from Swiss Federal Institute of Technology in Lausanne (EPFL) in 2016, where he continued as a postdoc in the Bioengineering Institute. In 2018, Dr. Feng established the Laboratory of Experimental Physical Biology at Zhejiang University. He is interested in developing and applying single-molecule tools for interdisciplinary problems in nanofluidics, biophysics and chemistry at the unexplored scales. He is a recipient of the Youth Award of Chinese Chemical Society, the EPFL Doctorate Award and the Future Leader of Bioengineering Award.

Dr. Yongping Fu is an assistant professor of Chemistry at Peking University. He received a B.S. degree in chemistry from Peking University in 2012 and a Ph.D. degree in chemistry from University of Wisconsin-Madison in 2018. His current research interest is to search for new organic-inorganic hybrid materials, to understand and control their properties, and to develop applications for photonic and quantum devices.

Dr. Baolin Guo received his Ph.D. degree from Royal Institute of Technology (KTH) in 2011 under the supervision of Professor Ann-Christine Albertsson. He started his academic career as a principal investigator at the Frontier Institute of Science and Technology (FIST), Xi'an Jiaotong University in 2011, where he is a full professor now. His research focuses on biomedical polymers including degradable conductive polymers for tissue engineering application, multifunctional hydrogels for wound healing, rapid hemostasis, tissue regeneration, adhesives, human motion sensing and controlled drug delivery.

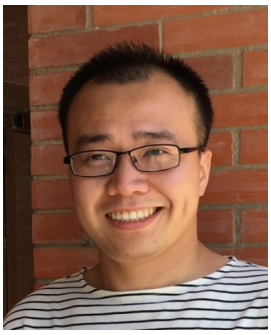


Dr. Da Han received his Ph.D. degree from the University of Florida in 2013 and worked as a scientist in Intel Corporation till 2018. He then joined the Institute of Molecular Medicine of Shanghai Jiao Tong University as a full professor. He is currently holding a professor position in Hangzhou Institute of Medicine, Chinese Academy of Sciences. His research interests include the elucidation of the physicochemical principles governing nucleic acid molecules and the development of "intelligent" molecular tools that can perform diagnostic and therapeutic functions.

Dr. Zuo-Quan Jiang received his B.S and Ph.D. degrees in Wuhan University in 2004 and 2009 resepectively. From 2009 to 2011, he worked as a postdoc fellow at University of Washington and City University of Hong Kong, and then he joined Institute of Functional Nano & Soft Materials, Soochow University (FUNSOM). During 2015–2016, he was a visiting professor at the Georgia Institute of Technology. Now he is the professor in Soochow University, focusing on the research on organic light emitting diodes and organic - functional materials.

Dr. Chunyang Lei is an associate professor in Analytical Chemistry in the College of Chemistry and Chemical Engineering at Hunan University. He received his B.S. (2008) and Ph.D. degrees (2014) at Hunan University. From 2014 to 2017, he carried out postdoctoral research at Zhejiang University. His current research focuses on the design of nucleic acid- and protein-based biomolecular tools for biosensing and bioengineering.

Dr. Peng Li received his B.S. (2006) and M.S. (2009) degrees from Fudan University in China, and Ph.D. degree (2014) from the University of Texas at San Antonio under the supervision of Prof. Banglin Chen. Then he worked with Professors Joseph Hupp and Omar K. Farha at Northwestern University as a postdoctoral fellow during 2014–2019. He joined Fudan University as a professor of chemistry in 2019. His research interest is related to functional porous materials for gas storage, separation, catalysis, and enzyme immobilization.



Dr. Lichen Liu received his B.S. degree from Nanjing University in 2012 and Ph.D. degree from Universitat Politècnica de València under the supervision of Prof. Avelino Corma in 2018. After two years of postdoctoral research with Prof. Avelino Corma in Instituto de Tecnología Química (CSIC-UPV), he started his independent career as an assistant professor at the Department of Chemistry, Tsinghua University in January 2021. Currently, his research interest focuses on the precise synthesis, structural characterizations and catalytic applications of supported subnanometric metal catalysts.

Dr. Siyu Lu is currently a full professor at Zhengzhou University. He received his Ph.D. degree from Jilin University under the supervision of Prof. Bai Yang. In 2016, he started his independent research career as a full professor at Zhengzhou University. He has been working on advanced photoelectric nanocrystals (carbon dots, semiconductors, *etc*.) for several years, from materials synthesis and characterization to understanding the underlying physics and chemistry mechanism. His recent research interest focuses on the design and synthesis of photoelectric nanocrystals and their applications in catalysis, fluorescence, and optoelectronic devices.

Dr. Hang Shi obtained the B.S. degree with honors in chemical engineering and technology at Hunan University in July 2008. Then he moved to Peking University and pursued his Ph. D. degree under the tutelage of Prof. Zhen Yang, focusing on natural product synthesis. In September 2013, he joined Prof. Tobias Ritter's lab at Harvard University as a postdoc to develop novel method for fluorination, as well as ^{18}F-labeling in collaboration with Prof. Neil Vasdev and Prof. Steven H. Liang. In November 2015, He moved to the Scripps Research Institute and joined Prof. Jin-Quan Yu's lab as a research associate, and mainly focused on developing regioselective and stereoselective remote C–H bond activation. He joined Westlake University to commence his independent studies in 2018, and was awarded Zhongzhou Endowed Assistant Professor.

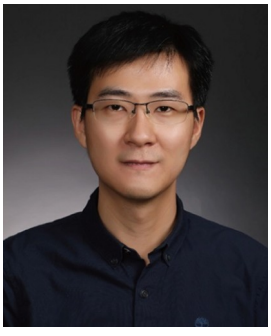
Dr. Xiaoyan Tang is an assistant professor (PI) in the College of Chemistry and Molecular Engineering at Peking University. She received her B.S. degree (2009) in Chemistry from Wuhan University and Ph.D. degree (2015) in Polymer Chemistry and Physics under the supervision of Prof. Yue-Sheng Li from the Changchun Institute of Applied Chemistry, Chinese Academy of Sciences. She then worked as a postdoctoral fellow and research scientist II in the group of Prof. Eugene Chen at Colorado State University before joining Peking University in 2020. Her current research interest focuses on the development of circular polymers with high performance from renewable resources and investigation of novel polymerization methodology.

Dr. Cheng Wang was a recipient of the National Science Fund for Distinguished Young Scholars. He obtained his B.S. degree (2003) from Wuhan University and his Ph.D. degree (2008) in organic chemistry from Institute of Chemistry, Chinese Academy of Sciences, under the supervision of Professors Deqing Zhang and Daoben Zhu. Following a postdoctoral research with Professor Sir J. Fraser Stoddart in Northwestern University, he joined Wuhan University as a professor in 2012. His research interest focuses on three-dimensional covalent organic frameworks (3D COFs), including their topology design, structure determination and applications.

Dr. Cheng Wang obtained his B.S. degree from Peking University in 2009 and Ph.D. degree in chemistry from University of North Carolina at Chapel Hill in 2013. Before joining the faculty of Xiamen University in 2015, he did a postdoc research in University of Chicago. He has the expertise in both synthetic inorganic chemistry and ultrafast spectroscopy. His research group developed a new two-dimensional material called metal-organic layer (MOL) as designer photocatalyst for C–H bond functionalization. Combining ultrafast spectroscopy with technical innovations such as automated laboratory and machine-learning to search for more efficient catalyst, the group developed a multi-discipline environment to target challenging chemical transformations.

Dr. Liang Wang received his Ph.D. degree from the State Key Laboratory of Inorganic Synthesis and Preparative Chemistry, Jilin University in 2013. Currently, he is a research professor at the College of Chemical and Biological Engineering at Zhejiang University. His research focuses on nanoporous catalysts and transformation of low-carbon molecules.

Dr. Xiaoming Wang received his B.S. degree in 2009 from Zhejiang University. In 2014, he obtained his Ph.D. degree from Shanghai Institute of Organic Chemistry (SIOC), Chinese Academy of Sciences under the supervision of Prof. Kuiling Ding. In the following years, he did his post-doctoral research with Prof. Frank Glorius at Münster University (Germany) and Prof. Kyoko Nozaki at University of Tokyo (Japan) respectively. In 2019, he joined SIOC as a professor. His current research interests mainly focus on development of novel synthetic strategies *via* bi- and multi-nuclear metallic catalysis and deoxygenative functionalization.

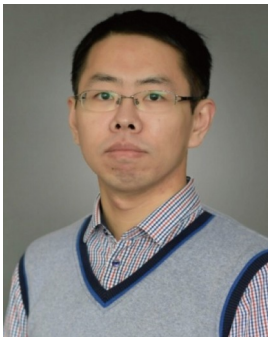


Dr. Jiang-Fei Xu is an associate professor at Tsinghua University. He received his Ph.D. degree from Technical Institute of Physics and Chemistry, Chinese Academy of Sciences in 2014 under the supervision of Prof. Qing-Zheng Yang. After two years of postdoctoral training with Prof. Xi Zhang at Tsinghua University, he joined the Department of Chemistry, Tsinghua University as an assistant professor in 2016. He was promoted to an associate professor in 2018. He was awarded the Chinese Chemical Society Young Chemist Award in 2018. His research interest focuses on supramolecular polymer materials and functional supramolecular assemblies.

Dr. Dingjiang Xue is currently a professor in the Key Laboratory of Molecular Nanostructure and Nanotechnology at Institute of Chemistry, Chinese Academy of Sciences. He received his Ph.D. degree in physical chemistry from Institute of Chemistry, Chinese Academy of Sciences in 2013. From 2013 to 2015, he was a postdoctoral researcher at Huazhong University of Science and Technology. In 2016, he joined the Institute of Chemistry, Chinese Academy of Sciences. From 2018 to 2019, he worked as a visiting scholar at University of Toronto. His current research interest mainly focuses on inorganic thin-film solar cells and indoor photovoltaics.

Dr. Anxiang Yin received his Ph.D. degree in inorganic chemistry from Peking University in 2012, under the supervision of Prof. Chunhua Yan and Prof. Yawen Zhang. After that, he was engaged in postdoctoral research in the research group of Prof. Xiangfeng Duan at the University of California, Los Angeles. In 2016, he joined the School of Chemistry and Chemical Engineering at Beijing Institute of Technology. His current research focuses on designing advanced nanocatalysts and interfaces for sustainable fixation of N_2 and CO_2 and conversion of green energies into chemical fuels.

Dr. Wei You got his B.S. degree from Tsinghua University in 2011 and Ph.D. degree in organic chemistry from Indiana University, Bloomington in 2016, respectively. Then he started as a postdoctoral associate at Cornell University. In November 2019, Dr. You joined the Key Laboratory of Engineering Plastics at the Institute of Chemistry, Chinese Academy of Sciences as a principal investigator. His current research interest is using synthetic chemistry to prepare novel functional polymers for sustainable materials and clean energy conversion applications.



Dr. Shuai Yuan is a full professor in the School of Chemistry and Chemical Engineering at Nanjing University. He earned his B.S. degree from Shandong University in 2013. He then received his Ph.D. in Chemistry from Texas A&M University, working under the supervision of Professor Hong-Cai Zhou. After postdoctoral studies with Prof. Yang Shao-Horn and Prof. Yuriy Román at the Massachusetts Institute of Technology, he joined Nanjing University in 2021. His research mainly focuses on organic-inorganic hydride materials for energy and environmental applications.

Dr. Zhenjie Zhang obtained his B.S. and M.S. degrees (Advisor: Professor Peng Cheng) from Nankai University. Then he gained Ph.D. degree from Professor Michael Zaworotko's group at University of South Florida. From 2014-2016, he conducted postdoc research in Professor Seth Cohen's Lab at UC San Diego. After that, he moved back to China as a full professor in College of Chemistry at Nankai University. His research mainly focuses on the rational design of crystalline framework materials (*e.g.*, COFs, MOFs, and molecular cages) for gas separation and gas-triggered actuating applications.