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Celebrating the 10th anniversary of ShanghaiTech University

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2023 has witnessed the tenth anniversary of ShanghaiTech University (https:// www.shanghaitech.edu.cn/en), that was jointly founded by the Chinese Academy of Sciences (CAS) and Shanghai Municipal People's Government in 2013. As a small-scale university oriented towards research and innovation, ShanghaiTech University aspires to be a high-level, international university for nurturing the next generation of innovative scientists, inventors, and entrepreneurs. Located in Shanghai's Zhangjiang Hi-Tech Park, ShanghaiTech plays an

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important role in the development of the Zhangjiang Comprehensive National Science Center, in partnership with CAS institutes. In addition, ShanghaiTech joined the list of China's World-Class Universities Project as the youngest university in 2022. With the backing and support of our two co-founding institutions, ShanghaiTech is committed to tackling the challenges that China and the world are facing in the fields of energy, materials, environment, human health, biological engineering, data science, artificial intelligence and electrical engineering.

Materials and chemistry research is highly valued our university, in

containing one of the first founded schools - the School of Physical Science and Technology (SPST) - where physicists, chemists and materials scientists work independently and cooperatively. Several institutes of ShanghaiTech also contribute to materials and chemistry research, for instance the Center for Transformative Science and the Institute of Carbon Neutrality. Besides, the proximity of neighboring world-class scientific facilities offers numerous opportunities for scientific collaborations on materials and chemistry research: Shanghai HIgh repetitioN rate XFEL and Extreme light facility (SHINE), Shanghai Synchrotron Radiation Facility (SSRF) and Shanghai



Pengxin Liu

Pengxin Liu is currently an assistant professor at ShanghaiTech University where he joined in 2021. He worked with Prof. Nanfeng Zheng (Xiamen Univ.) from 2010 to 2018 for PhD and a postdoctoral training, then with Prof. Christophe Copéret (ETH) from 2018 to 2021 as a research assistant. Liu is interested thesurface chemistry nanomaterials, especially atomically dispersed ultrathin-structured oxides other model systems. He is a

recipient of the ETH Fellowship and Marie Curie Fellowship. He is also a public science influencer with 1 MLN followers.



Zhijun Ning

Zhijun Ning is a tenured associate professor at the School of Physical Science and Technology, Shanghai-Tech University. His work focuses on solution processed optoelectronic materials and devices. Using materials design and synthesis, nanostructure fabrication, device engineering to address the challenges of carrier transport, electron and photon conversion for solar cells, photodetectors, and light emitting diodes. Zhijun Ning has been selected as a Highly Cited

Researcher by Clarivate Analytics. He serves as an Advisory Board Member on Cell Report Physical Science; Early Career Advisory Board Member on ACS Materials Letters.

Soft X-ray Free Electron Laser Facility (SXEFL), to name a few.

Motivated by the impressive progress made in materials and chemistry research at ShanghaiTech in the past decade, we organized this themed collection to highlight the excellent, diverse and interdisciplinary research. We are pleased to invite tenured and tenure-track professors from SPST and distinguished adjunct professors from institutes of CAS to contribute in this collection. As we write, the reviewing and revising progress is happening simultaneously.

While the scope of this themed collection is extensive, composed of catalytic materials, biomaterials, energy materials and characterization techniques, it cannot fully cover all the research fields in ShanghaiTech. We hope this collection serves as a staged report that attracts interest from other universities and institutes, inspiring potential collaborations and meaningful communications within the broad filed of materials and chemistry.

We'd like to express our gratitude to the Editor-in-Chief Professor Yu, the Associate Editors, and the editorial team at Materials Chemistry Frontiers for making this collection happen.



Zhujun Wang

Zhu-Jun Wang is renowned in electron microscopy and heterogeneous catalysis, having developed а near-ambientpressure in situ SEM during his PhD. This technique integrates atomic-scale information from in situ TEM/STM into a broader context with in situ SEM, complemented by NAP-XPS data. This multi-scale approach allows the investigation of catalyst dynamics during reactions, bridging the pressure-gap and

linking atomic details with collective processes. His notable work includes analyzing surface dynamics of graphene and 2D material growth on metal catalysts, ranging from micrometer to atomic scales under controlled conditions.



Chunhong Ye

Chunhong Ye is currently an assistant professor in the School **Physical** Science **Technology** at ShanghaiTech University. She received her PhD from the Nangjing Forestry University, China (2013). She carried out post-doctoral research at the Georgia Institute of Technology, USA and Leibniz Institute of Polymer Dresden, Germany. She is also a recipient theHumboldt Research Fellowship (2015-2018). Her

research interests include the interfacial assembly of bio/synthetic polymers, biomimetic 3D stimulated soft micro-actuator, chiral plasmonic structures and optical properties.