



南京大学化学化工学院

School of Chemistry and Chemical Engineering
Nanjing University



THE NEXT PHASE IN A CENTURY OF CHEMICAL BRILLIANCE

Established in 1920, the School of Chemistry and Chemical Engineering (SCCE) at Nanjing University (NJU) is one of the oldest and strongest in China. Reviewing a century of achievement, its dean, Shuhua Li, discusses his vision for future success.



Shuhua Li

Dean of the School of Chemistry
and Chemical Engineering at
Nanjing University

● WHAT MAKES SCCE EXCEPTIONAL?

We benefit from the past efforts of distinguished scholars and educators, who promoted our growth at different stages in history. These include Jiyu Gao, an organic chemist who chaired the chemistry department of National Central University, physical chemist, Fangxun Li, and inorganic chemist, Anbang Dai, who led Jinling University's chemistry programme. The merging of the two universities in 1952 led to today's NJU and brought together many high-calibre chemists to make us a hub for chemical research and education. After the efforts of several generations, we've built our strengths in all the sub-disciplines of chemical science, especially in inorganic chemistry and analytical chemistry. Legacies of academic excellence, rigorous scholarship, and a practical attitude live on, making us distinct.

● WHAT DO YOU SEE AS SCCE'S MISSION?

Our development goals evolve with societal progress. In the early days, we compared our achievements with others in China. Today, we are eyeing the global stage and trying to build a world-class chemical programme. We aim to lead with cutting-edge chemical research, not just represented in the volume of publications, but in quality and originality. Meanwhile, it is our remit to transform research results into disruptive technologies that can boost industrial growth.

● HOW DOES CHEMISTRY CONTRIBUTE TO SUSTAINABLE DEVELOPMENT?

Chemistry plays an essential role. At SCCE, we promote green chemical engineering, seeking to optimize processes to reduce pollution and emissions, while developing technologies that can produce more, with less energy. Our studies on new functional materials, particularly, energy and optoelectrical materials, focus on improving the efficiency of energy conversion. We also emphasize synthesizing molecules that can be used in drug development, or as probes for disease detection. In pushing the limits of measurement, our research seeks to improve characterization techniques to better understand the microscopic world.

● HOW DO YOU ACCELERATE TRANSLATION OF RESEARCH FINDINGS AT SCCE?

We have a programme to encourage interdisciplinary collaboration for transformative research with funding support. These teams are assessed with a diversified evaluation system centred on real industry impact. One team, for example, has developed an interface technology that significantly improves reaction efficiency, reducing energy use and emission. The reactor system is used in the chemical industry, yielding great financial growth. We also foster innovation among talented young researchers, providing them lab space and human resources. A new SCCE building gives access to advanced facilities for all new recruits.

● HOW DO YOU INSPIRE LEARNING?

We encourage students to work in labs as early as possible. Our comprehensive research platforms allow around 80% of undergraduates to get hands-on research skills in labs from their second year onward. Three quarters will pursue graduate studies. We also have dedicated faculty to provide quality courses to inspire creativity. These are taught from popular textbooks compiled by us, several of which have become standards in China's chemical education. ■