

Preface to the Special Issue on A Celebration of the 100th Birthday of Prof. Kun Huang

September 2nd, 2019 is the 100th birthday of Prof. Kun Huang, a world-famous physicist and one of the founders of solid state physics and semiconductor physics in China.

Prof. Kun Huang has made outstanding achievements in the field of solid state physics during his study in the UK. In 1951, Prof. Kun Huang came back to China, and successively served as a professor in the Department of Physics and the dean of the solid state physics teaching and research section, Peking University. He is also the founder of solid state physics in China. In 1956, Peking University, Fudan University and other three Universities jointly established semiconductor teaching and research section. Prof. Kun Huang was the dean and Prof. Xide Xie was the deputy dean. This opened a new era of self-cultivating semiconductor science and technology talents in China, and trained a large number of semiconductor talents for China.

Prof. Kun Huang was selected as a member of the Mathematics and Physics Department of the Chinese Academy of Sciences in 1955. He served as the director, and honorary director of Institute of Semiconductors, Chinese Academy of Sciences since 1977. And he was successively elected as a foreign academician of the Royal Swedish Academy of Sciences, an academician of the Third World Academy of Sciences, a member of IUPAP semiconductor branch, and the chairman of Chinese Physical Society.

To commemorate Prof. Kun Huang, Institute of Semiconductors CAS, Peking University, Chinese Physical Society, and 93 Society co-host **a celebration of the 100th Birthday of Prof. Kun Huang and seminar on semiconductor discipline development** in Xijiao Hotel Beijing during September 1–3, 2019. *Journal of Semiconductors* invites experts to write research and review papers in the fields of semiconductor materials, physics and devices, and publishes this special issue in commemoration of Prof. Kun Huang's Centenary Birthday. This special issue contains four review papers and four research papers, which are from University of North Carolina at Charlotte, Lawrence Berkeley National Laboratory, Shanghai Institute of Technical Physics CAS, Institute of Semiconductors CAS, Nanjing University, Beijing Computational Science Research Center etc. The latest progress and development of semiconductor related fields at domestic and abroad are introduced. Prof. Linwang Wang's review paper entitled "Some recent advances in *ab initio* calculations of nonradiative decay rates of point defects in semiconductors" from University of North Carolina at Charlotte, and Prof. Yong Zhang's review paper entitled "Applications of Huang–Rhys theory in semiconductor optical spectroscopy" from Lawrence Berkeley National Laboratory, follow Prof. Kun Huang's main research direction, and introduce the latest progress in phonon-related research.

In this special issue, the first article¹⁾ in the first issue of Volume I of *Chinese Journal of Semiconductors*²⁾ published by Prof. Kun Huang is republished after 40 years in English version (K Huang. On the Applicability of Adiabatic Approximation in Multiphonon Recombination Theory. *Chin J Semicond*, 1980, 1(1), 1).

We hope that the publication of this special issue will contribute to the academic exchange and development of semiconductor science, and commemorate Prof. Kun Huang's Centenary Birthday.

We would like to thank all the authors who have contributed high-quality peer-reviewed articles to this special issue. We are also grateful to other people from Institute of Semiconductors CAS, including Prof. Ping-Heng Tan, Prof. Kaiyou Wang, Prof. Ming Li, Prof. Jun-Wei Luo, Prof. Zhongming Wei, Prof. Dahai Wei, Prof. Jun Zhang, Prof. Xionghua Liu, Mr. Jun Yan, *et al.* for their great contributions to this special issue.

Preparatory Committee for the Conference

1) The article was published in Chinese.

2) *Journal of Semiconductors* is previously as *Chinese Journal of Semiconductors*.