

Bio and Photo of Toshimori Sekine



Toshimori Sekine

HPSTAR

Contact address;

toshimori.sekine@hpstar.ac.cn

Toshimori Sekine received his DSc degree from the Tokyo Institute of Technology, Japan. After he worked worldwide at the University of Chicago, Monash University, Australian National University, National Institute for Materials Science (former NIRIM), California Institute of Technology, and Hiroshima University, he joined Center for High Pressure Science & Technology Advanced Research (HPSTAR) as a staff scientist. He built up a shock compression laboratory in NIRIM (current NIMS). His current research focuses on various applications of shock compression techniques to Earth and planetary science, the formation and evolution of biomolecules related to the origin of life, materials science, and syntheses and exploration of novel materials using *in situ* measurements, sample recovery techniques, and numerical simulations. He has experienced shock experiments by gas guns at NIMS and Caltech, laser shocks at Gekko XII at University of Osaka, SG II at Shanghai, SG IIIp at Miaynag, and XFEL facilities at SACLA and PAL. His recent book of *Shock-Induced Chemistry* is available from Springer Nature. He is a fellow of the American Physical Society and an invited professor of Graduate School of Engineering, University of Osaka.

In this summer school, Dr. Sekine will share important aspects of dynamic high pressure science and technology that may not be realized in the popular and conventional static high pressure devices, as well as the basic knowledge of shock compression. Measurement methods at dynamic high pressures will be helpful to understand the “static” high pressure phenomena and “actual” behaviors of materials by pressures. Participants are expected to gain new ideas in the interesting and attractive high pressure world.