

Editorial

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Photo-excited processing with relevance to a wide range of applications has increasingly attracted attention due to the unique features of high quality, high efficiency, high flexibility, high resolution, and versatility. This Special Issue of *Applied Physics B—Lasers and Optics* collects manuscripts invited from presentations presented at *9th International Conference on Photo-Excited Processes and Applications (ICPEPA-9)*, held from September 29 to October 2, 2014, at Matsue, Japan.

ICPEPA-9 provided a forum for sharing the results of both fundamental research and application-oriented work related to the forefront of the field of photo-excited processing technologies and for exchanging ideas in a relaxing environment. Specifically, the conference topics ranged from the fundamental aspects of laser–material interactions,

theory, modeling, dynamics, and diagnostics to applications with cutting, drilling, modification, deposition, synthesis, micro- and nano-structuring, and three-dimensional processing as well as new trends in photo excitations and laser materials processing such as plasmon-enhanced processes and controlled photon-beam processing. The technical program for the 4-day event included 17 invited talks, 49 oral presentations, and 38 poster presentations for a total of 104 contributions from 15 countries.

This Special Issue shares the information on novel achievements in photo-excited processes and applications presented at ICPEPA-9 with a wide readership. Highlights of the selection of manuscripts include plasmon-enhanced nano-processing, nano-material synthesis, vacuum and extreme ultraviolet light applications.

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