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## IPPS Lecture & Seminar (大学間連携オムニバス講義)

Title: Industrial Applications of the MPC Technology

Lecturer: Dr. Jaegu Choi [Korea Electrotechnology Research Institute (KERI) ]

Date & Time: November 1 2017, 14:30~16:00

Venue: Kurokami South W5 (Engineering Research Labs., 3rd Floor, (Meeting room))

**Abst. :** Magnetic pulse compression (MPC) technology which utilizes nonlinearity of the magnetization characteristics of ferromagnetic materials can generate nonthermal plasmas very effectively. Using the MPC technology, electrons are accelerated to efficiently generate ions and radicals by high voltage and large current with very fast rise time and short pulse width. Potential applications of the nonthermal plasmas generated by the MPC are flue gas treatment, laser excitation, odor control, inactivation of microorganisms, waste water treatment, surface treatment, nano-particle synthesis and etc. In this presentation, two industrial applications of the MPC technology are presented. One is a moderate-scale MPC used as a power supply for an excimer laser system and the other is a large-scale MPC used for flue gas treatment (DeNO<sub>x</sub> and DeSO<sub>x</sub>).

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