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Measurement of Spatiotemporal Gas Temperature during Pulsed Discharge SHO OKADA, Graduate school of Science and Technology, Kumamoto University, 2-39-1 Kurokami, Kumamoto 860-8555, Japan, DOUYAN WANG, Priority Organization for Innovation and Excellence, Kumamoto University, 2-39-1, Kurokami, Kumamoto 860-8555, Japan, TAKAO NAMIHIRA, Bioelectrics Research Center, Kumamoto University, 2-39-1, Kurokami, Kumamoto 860-8555, Japan, SUNAO KATSUKI, Priority Organization for Innovation and Excellence, Kumamoto University, 2-39-1, Kurokami, Kumamoto 860-8555, Japan, HIDENORI AKIYAMA, Graduate school of Science and Technology, Kumamoto University, 2-39-1 Kurokami, Kumamoto 860-8555, Japan — Pulsed power technology has been used in many applications such as control of NOx and SOx from exhaust gases, treatment of dioxins, generation of ozone, and laser excitation. In this situation, the temperature during pulsed discharge is important parameter. Therefore, in this work, the temperature of medium gas in discharge reactor was measured during pulsed discharge process. As the experimental method, the rotational temperature during the pulsed discharge in atmospheric gas gap was measured by analysis of optical emissions. In this paper, the spatial and the temporal dependences of the rotational temperature during pulsed discharge would be reported.

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