

Abstract Submitted  
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**Imaging and spectroscopy of optical transition radiation from thin foils irradiated by ultraintense laser pulse**<sup>1</sup> LEEJIN BAE, MINSANG CHO, YELIM JI, GYEONGBO KANG, MINJU KIM, SEONGHYEOK YANG, CHUINHONG YAP, BYOUNG-ICK CHO, Gwangju Inst of Sci Tech, CHEONHA JEON, Institute for Basic Science — Optical transition radiation (OTR) by relativistic electrons emerging the rear surface of target conveys numerous information on laser-target interaction. Imaging of the radiation shows the spatial distribution of hot electron beams. Spectrum of OTR infers the temporal structure of relativistic electron bunches. In this contribution, we present the OTR images and spectra from foil target with various thickness (100 nm – 10  $\mu$ m) irradiated by intense laser pulses up to  $10^{20}$  W/cm<sup>2</sup>. The significant modulation on OTR shape and spectra are observed from nano-foils at extremely high intensity. Pre-pulses also introduce significant difference in OTR spectra. Detailed data and possible mechanism for such modulations will be presented.

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Leejin Bae  
Gwangju Inst of Sci  
Tech

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