

Comments from Award Recipient

I am greatly honored to receive the Young Researcher Paper Award 2016 of *Sensors and Materials*, an authoritative journal on sensors and sensing materials. This study was conducted in cooperation with Dr. Futami (National Institute of Technology, Kumamoto College), Dr. Koshimizu and Dr. Fujimoto (Tohoku University), and Dr. Ogino (the University of Tokyo). I am grateful to them and all members of my laboratory including Dr. Okada, Mr. Kato, and Mr. Nakauchi (Nara Institute of Science and Technology). I started this study with the idea that the high-temperature superconducting material MgB₂ may be used for radiation detectors, such as scintillators and dosimeters, with a high detection efficiency for neutrons because of its high B content. From the viewpoint of modern condensed matter physics, it is considered that hardly any radiation-induced fluorescence would be emitted from conductors in which the bandgap is not basically defined. In practice, however, such fluorescence was observed in experiments, revealing that radiation detection is possible using MgB₂. I will continue the research and development of sensors and sensing materials used for radiation detection with the approach of performing speculative experiments rather than finding a reason for impossibility.