

**10/06/2009 Professor T. Takahashi — Discovering a novel phenomenon on the motion of electron spins in two-dimensional systems**

The research group of Prof. Takahashi in WPI-AIMR, Prof. Sakamoto in Chiba University, and Prof. Oguchi in Hiroshima University has discovered a novel phenomenon on the motion of electron spins in two-dimensional systems. This new phenomenon is based on a new quantum effect which had been overlooked so far, but is well explained by the quantum theory. The present new finding definitely opens a way for designing a new spintronics device which performs an ultrahigh speed and multi-functional operation with an extremely low energy consumption (1/1000 compared to the conventional one). The present discovery is regarded as a great step toward developing high-speed, multi-functional, and ecological devices.

[Contact about the research]

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