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## Hub Meeting



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## 「スピン」を利用した新たな電力変換

*A new route to electricity generation based on quantum spins*

### Summary

In 1831, Michael Faraday observed electric currents when he slides a bar magnet in and out of his coil of wires. This effect of electromagnetic induction serves as a bedrock of modern technologies, such as motors and inductors. In 2009, a new kind of electricity generation was experimentally reported. Now you don't need to move a magnet. What is "moving" here is the quantum spin nanostructure inside the magnet, which triggers a conversion of the internal spin energy of the magnet into an electric one. The two phenomena turn out to be like two sides of a coin, both being fundamental and universal physical effects. We will overview recent progresses in the study of electricity generation utilizing quantum spins.

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参加登録