# 第１８回錯体物性化学講演会

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金属錯体を基盤とする磁性体や伝導体を用いた機能性分子材料やスピントロニクス研究の第一人者である Eugenio Coronado 教授（Univ. de Valencia, Spain）をお招きして、講演会を開催いたします。
皆さまのご来聴をお待ち申し上げます。

**日時：2015 年 8 月 20 日（木）16: 00 ～ 17:30**
**場所：理学部 2 号館 3 階　化学第一講義室**

**講演タイトル：**

### Magnetic Molecules and Hybrid Materials for Molecular Spintronics

**Abstract:** Spin-based electronics is one of the emerging branches in today's nanotechnology and the most active area within nanomagnetism. So far spintronics has been based on conventional materials like inorganic metals and semiconductors. Still, molecular electronics emerged several decades ago as a promising possibility to complement or even to replace conventional inorganic electronics when it goes nano. In this context, a natural evolution of molecular electronics is that of using magnetic molecules, as well as molecule-based materials, as components of new spintronic systems.

In this talk the important role that chemistry can play in molecular spintronics is highlighted. In the first part I will show that magnetic molecules based on lanthanide com plexes can provide ideal examples of spin qubits which can be of interest in quantum computing. In the second part the manipulation of the spin through the temperature or through an electri c field will be illustrated in nanodevices formed by spin-crossover nanoparticles. In the third part molecular materials will be integrated in spintronic heterostructures in order to fabricate molecule-based spintronic devices. In particular, I will report the fabrication of spin-OLED devices in which the light can be tuned though a magnetic field.

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