

## **Seminar**

### **The effect of magnetic field on the structure of nanoscale systems**

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Nanoscale spintronics aim to identify new spin transport effects near the limit of electronic component's miniaturization. While the focus in this field is mainly on magneto-transport properties at the nanoscale, not much is known about magneto-structural properties in nanoscale conductors. Here, we reveal a new phenomenon: the direction of applied magnetic field can affect the chemical bonds in nanoscale systems. We use atomic chains and single molecule junctions to show that magnetic field direction and strength affects fundamental quantities such as the inter-atomic distance, formation probability, and the strength of a chemical bond. Our findings reveal that magnetic field can tune the most fundamental properties of nanoscale materials.

***Thursday, Nov 22<sup>nd</sup> 2018***

***4:00 PM (Tea/Coffee at 3:30 PM)***

***Seminar Hall, TIFR-H***