Coupling and Phase Transitions in Magnetic Nanostructures

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In surface-supported magnetic nanostructure assemblies, the role of indirect exchange coupling has not been well studied. I will use Fe dots on Cu(111) substrate as an example to demonstrate how such kind of coupling can affect the magnetic phase transitions. In the second part of the talk, I will show some unexpected structural and magnetic phase transitions in 1D and 2D FeCo alloys that are not observed in their 3D counterpart.

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