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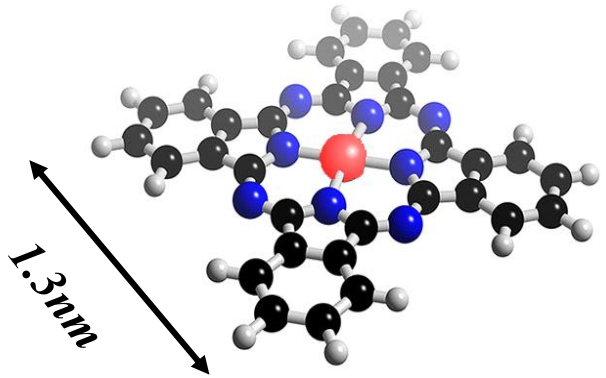
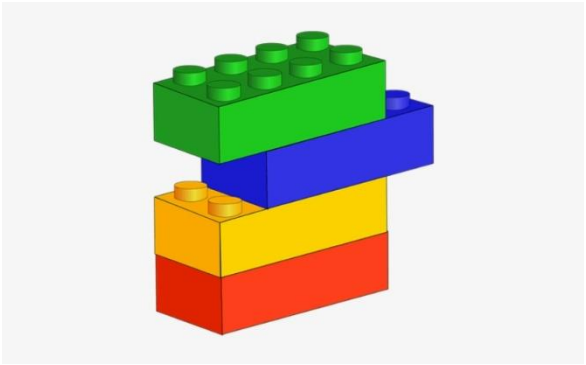
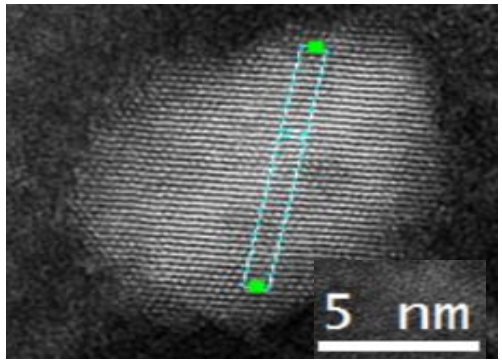
Twisted Magnetism: Chiral magnetic ordering in ultra-short 1D chains

Quantum Spin Chains Grant #:
1804414 and **1805585**

Metal Phthalocyanine (MPc)

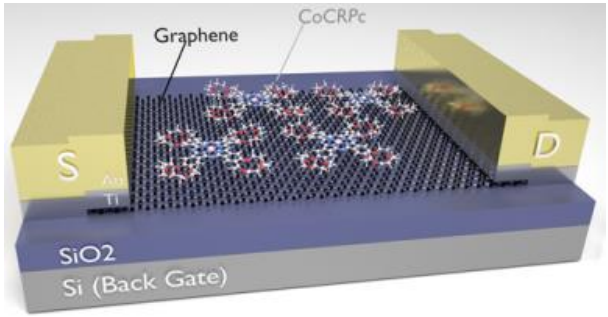


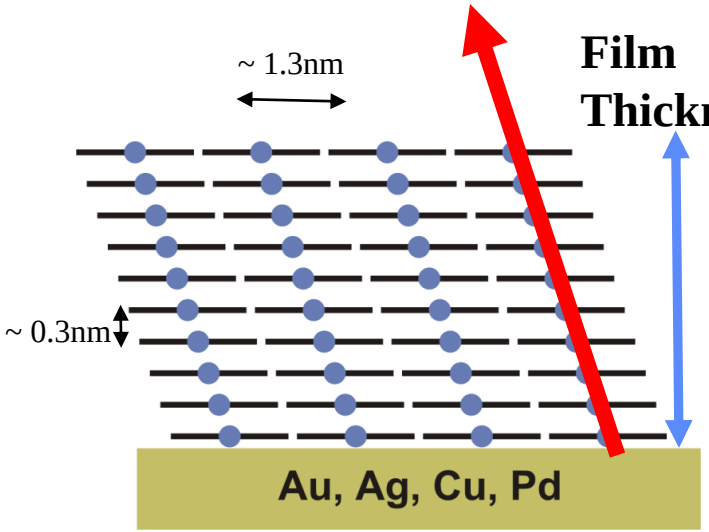


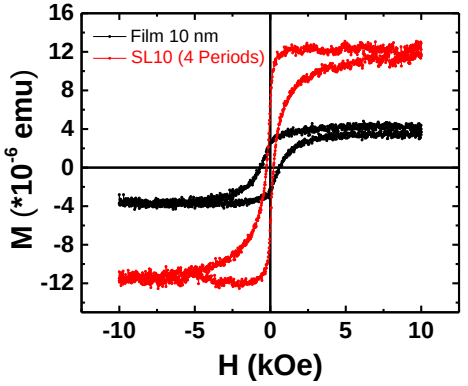


1D atomic chains

- *M: Co, Cu, Ni, Mn, Fe*
- *N*
- *C*







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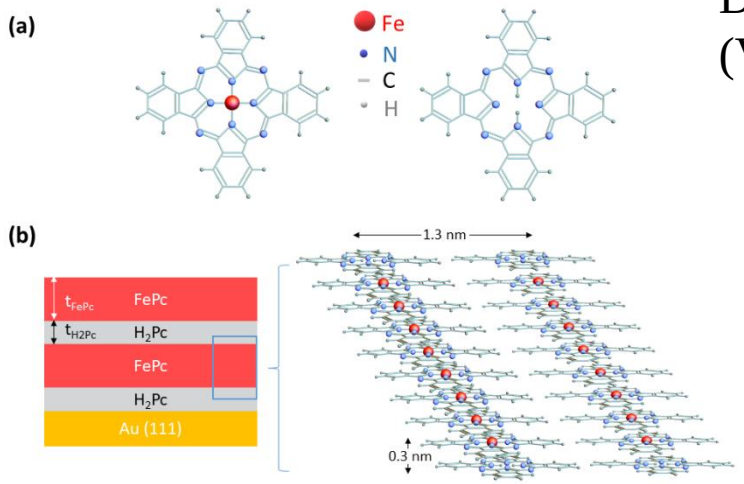
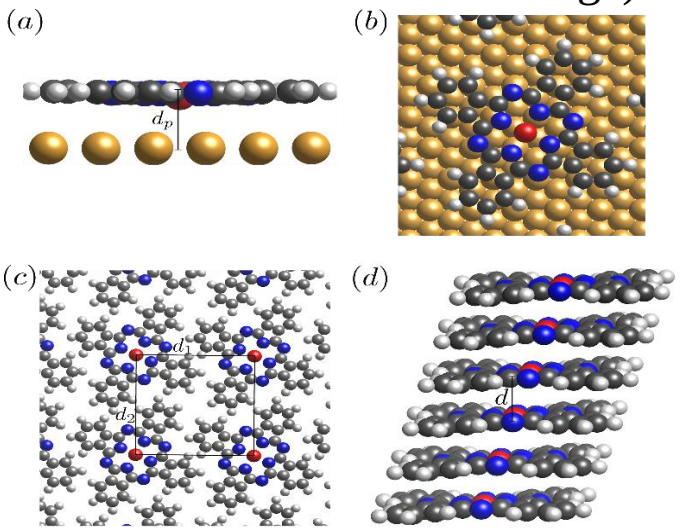
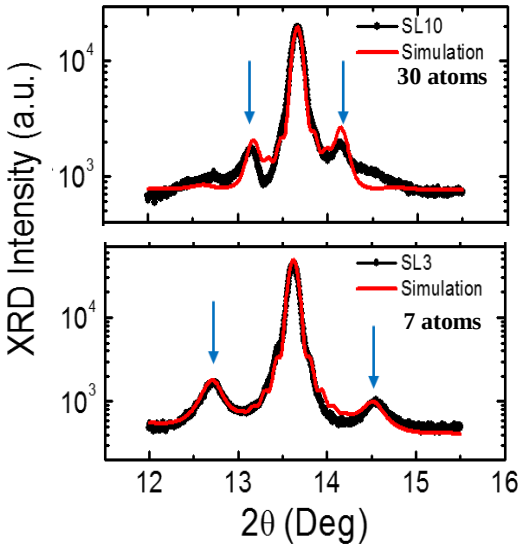
DFT Calculations with VASP
(Vienna Ab initio Simulation Package)





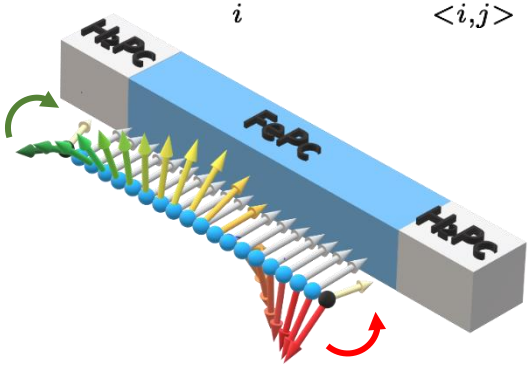
Organic Superlattices:

1) $FePc/H_2Pc$
2) FePc/CoPc
3) FePc/MnPc



$$E = -\mu_0 \sum_i \vec{H} \cdot \vec{m}_i - \sum_{<i,j>} \left(J\, \vec{m}_i \cdot \vec{m}_j + \vec{D}_{i,j} \cdot (\vec{m}_i \times \vec{m}_j) \right)$$

\+ **Boundary Conditions**



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