

## Supplementary Material

### **Spin State of Single Molecular Magnet (SMM) Creating Long Range Ordering on Ferromagnetic Layers of Magnetic Tunnel Junction -A Monte Carlo Study**

Andrew Grizzle, Christopher D'Angelo, Pawan Tyagi\*

Center for Nanotechnology Research and Education, Mechanical Engineering, University of the District of Columbia, Washington DC-20008, USA

Email of corresponding author: [ptyagi@udc.edu](mailto:ptyagi@udc.edu)

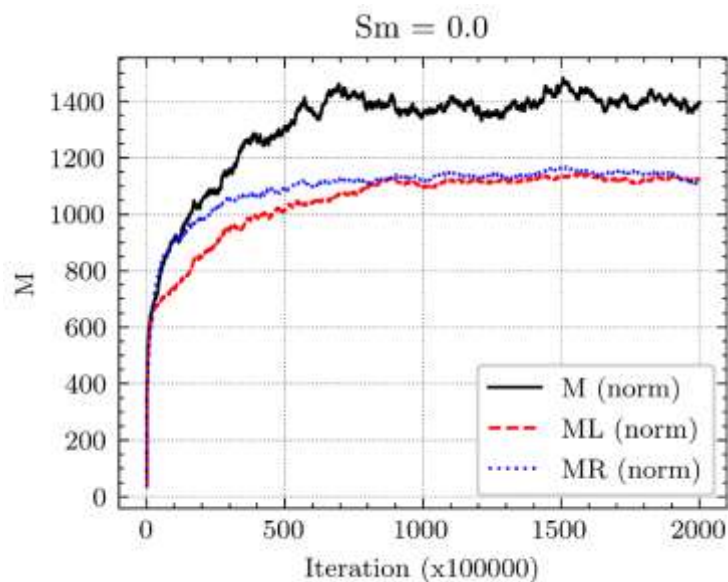


Fig. S1: M vs. time for  $S_m=0$ .

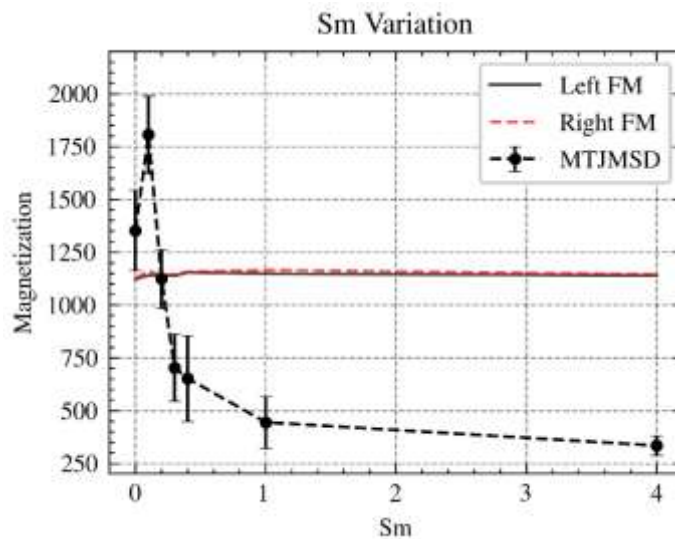


Fig.S2: Magnetization vs.  $S_m$  for 0-4  $S_m$  range

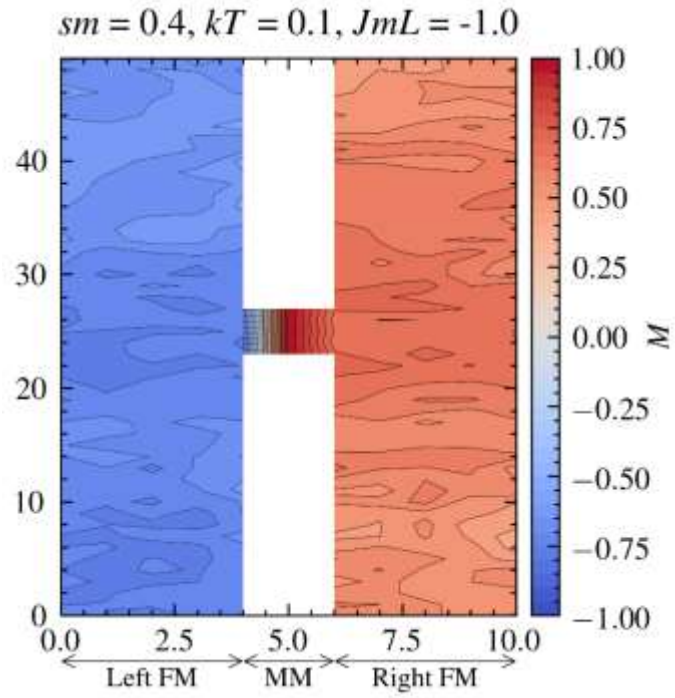


Fig. S3: Spatial correlation factor for  $Sm=0.4$

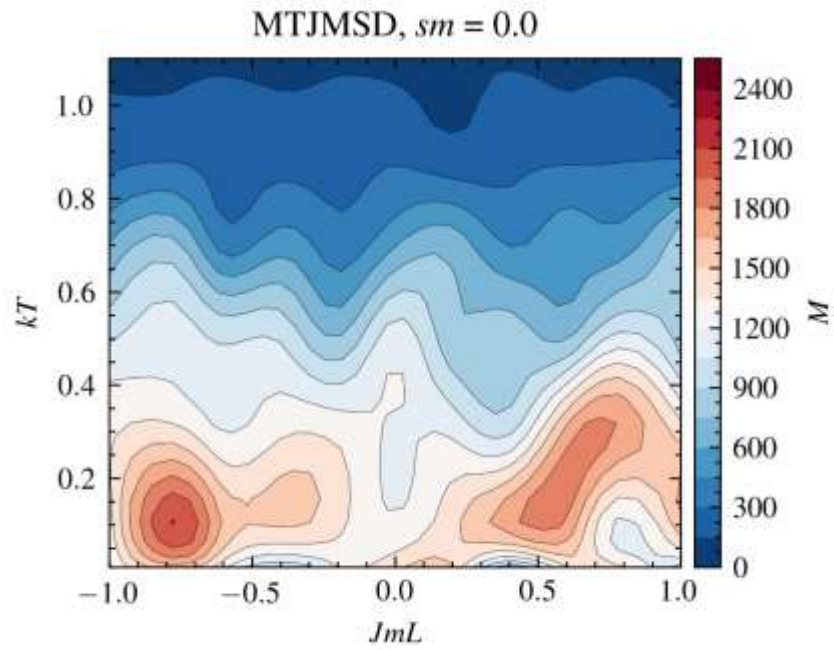


Fig. S4:  $kT$  vs  $JmL$  for  $Sm=0$ .  $JmR=|JmL|$ .