

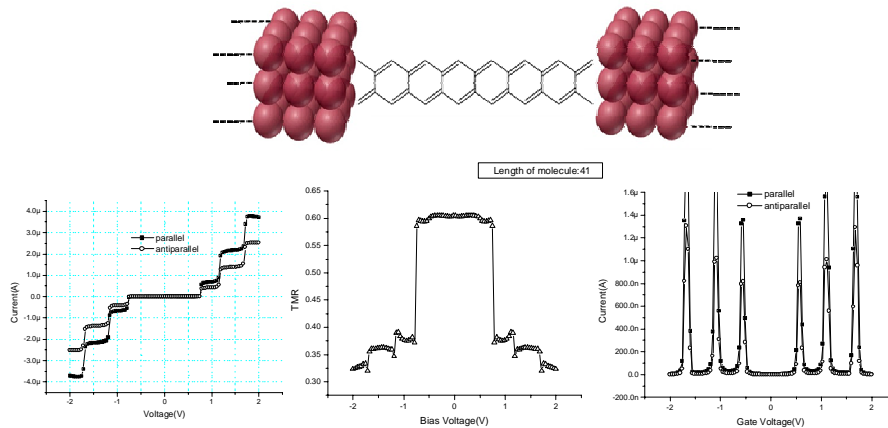
## TUNNELING MAGNETORESISTANCE OF POLYACENE-BASED MAGNETIC JUNCTION

M. Askari\*, N. Shahtahmassebi, D. Vahedi, M. Ashhadi

Department of Physics and Center for Nano Research, Ferdowsi University of Mashhad, Iran

\*E-mail:skr\_mstf@yahoo.com

In this work, using a tight-binding Hamiltonian and a non-equilibrium Green's function technique, the spin-dependent transport properties of the electrode/ single molecule/electrode system is numerically investigated. We choose a typical ferromagnetic (FM) metal with simple cubic structure as the electrode and polyacene as the molecule. Based on Landauer Formalism, we determined the current-voltage (I-V) characteristic of the system. In addition, the tunnel magnetoresistance (TMR) of the FM/polyacene/FM structure is calculated. Applying the gate voltage on the polyacene molecule modified the I-V and TMR curves.



### References

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