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Role of the magnetic anisotropy in organic spin valves

V. Kalappattil^{1,#}, R. Geng^{2,#}, S.H. Liang², D. Mukherjee¹, J. Devkota², A. Roy³, M.H. Luong^{2,4},
N.D. Lai⁴, L.A. Hornak⁵, T.D. Nguyen^{2,*}, W.B. Zhao⁶, X.G. Li⁶, N.H. Duc⁷, R. Das¹, S.
Chandra¹, H. Srikanth¹, and M.H. Phan^{1,*}

¹ *Department of Physics, University of South Florida, Tampa, Florida 33620, USA*

² *Department of Physics and Astronomy, University of Georgia, Athens, GA 30602, USA*

³ *Department of Chemistry, University of Georgia, Athens, GA 30602, USA*

⁴ *Laboratoire de Photonique Quantique et Moléculaire, Ecole Normale Supérieure de Cachan,
UMR 8537, CentraleSupélec, CNRS, Université Paris-Saclay, 94235 Cachan, France*

⁵ *College of Engineering, University of Georgia, Athens, GA 30602, USA*

⁶ *Hefei National Laboratory for Physical Sciences at Microscale, Department of Physics,
University of Science and Technology of China, Hefei 230026, and Collaborative Innovation
Center of Advanced Microstructures, Nanjing University, Nanjing 210093, China*

⁷ *VNU Key Laboratory for Micro-nano Technology and Faculty of Physics Engineering and
Nanotechnology, VNU University of Engineering and Technology, Vietnam National University,
Hanoi, 144 Xuan Thuy Road, Cau Giay, Hanoi, Viet Nam*

Abstract

Magnetic anisotropy plays an important role in determining the magnetic functionality of thin film based electronic devices. We present here, the first systematic study of the correlation between magnetoresistance (MR) response in organic spin valves (OSVs) and magnetic anisotropy of the bottom ferromagnetic electrode over a wide temperature range (10K – 350K). The magnetic anisotropy of a $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ (LSMO) film epitaxially grown on a SrTiO_3 (STO) substrate was manipulated by reducing film thickness from 200 nm to 20 nm. Substrate-

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