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Towards Implementation of a Solid State Quantum Computer Based on Endohedral Fullerenes D.V. PELEKHOV, The Ohio State University, P. BANERJEE, The Ohio State University, I.H. LEE, The Ohio State University, K.C. FONG, The Ohio State University, YU. OBUKHOV, The Ohio State University, J. MARTINDALE , The Ohio State University, P. C. HAMMEL, The Ohio State University, J.P. PHILLIPS , University of Southern Mississippi, S. STEVENSON, University of Southern Mississippi — We report on progress investigating the feasibility of fabricating a Solid State Quantum Computer based on endohedral fullerenes (fullerenes containing species with unpaired electron spins). The results of experiments on endohedral fullerene systems using Magnetic Resonance Force Microscopy, conventional Electron Spin Resonance and Scanning Tunneling Microscopy will be presented.

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