

Symposium 10

Title: **Nanostructures for quantum device technology**
Chair: Vladimir Privman
Chair Assistant: Krishnayya Cheemalapati
Location: 175 Snell

Monday June 13, 2005

Presiding:

Paper	Time	Title and Authors
10-01	11:00 - 11:40 AM	Evaluation of Decoherence for Quantum Control and Computing V. Privman
10-02*	11:40 - 12:20 PM	Spins in Semiconductors for Storing and Processing Quantum Information H.W. Jiang
10-03*	1:30 - 2:10 PM	Efficient Wave-Induced Switching & Quantum-NOT Operation in Coupled Quantum Wires A. Ramamoorthy and J. P. BIRD
10-04	2:10 - 2:50 PM	Transmission Coefficient for an Electron Through a Quantum Point Contact in an Electric and Magnetic Field M.L. GLASSER, N.J.M. Horing, and K. Sabeeh
10-05*	3:20 - 4:00 PM	Mesoscopic and Microscopic Spin Injection, Spin Precession, Spin Diffusion and Spin Transport in Semiconductor Nanostructures M. W. WU
10-06*	4:00 - 4:40 PM	Irreversible Deposition of Particles on Pre-Treated Surfaces A. CADILHE and N. Araújo
10-07	4:40 - 5:20 PM	Synthesis and Applications of Monofunctional Gold Nanoparticles J. G. Worden, Q. Dai, X. Liu and Q. HUO

Tuesday June 14, 2005

Presiding:

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| 10-08 | 10:30 – 11:10 AM | Decoherence of a Quantum System and Dynamics of a Heat Bath
S. SAIKIN |
| 10-09 | 11:10 – 11:50 AM | Collective Decoherence of Nuclear Spin Clusters
A. FEDOROV |
| 10-10 | 11:50 – 12:30 PM | Loss of Coherence in Gate-Controlled Qubit Systems
D. SOLENOV |
| 10-11* | 1:30 – 2:10 PM | Single-Photon Optical Detectors Based on Superconducting Nanostructures
R. SOBOLEWSKI |
| 10-12 | 2:10 – 2:50 PM | Decoherence and Loss of Entanglement
D. TOLKUNOV and V. Privman |
| 10-13* | 3:20 – 4:00 PM | Frequency Study of the Microwave Induced Resistance Oscillations of a High Mobility Two-Dimensional Electron Gas
S. A. STUDENIKIN, M. Byszewski, D.K. Maude, M. Potemski, A. Sachrajda, M. Hilke, L. N. Pfeiffer, and K. W. West |
| 10-14 | 4:00 – 4:40 PM | The Influence of Weak Measurement on Electron Transport in Quantum Dots Chains
L. FEDICHKIN and D. Solenov |
| 10-15 | 4:40 – 5:20 PM | On Quantum Walks on Graphs
C. TAMON |

Wednesday June 15, 2005

Presiding:

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| 10-16* | 10:00 – 10:40 AM | Ballistic Electro Photonics
V. NARAYANAMURTI |
| 10-17* | 10:40 – 11:20 AM | Ab Initio Analysis of Electron-Phonon Coupling in
Molecular Devices
H. GUO |
| 10-18 | 11:20 – 12:00 PM | Spin-polarized Injection and Transport in a Schottky
Diode
M. SHEN, S. Saikin and M.-C. Cheng |
| 10-19 | 12:00 – 12:20 PM | Indirect Interaction of Localized Magnetic Moments in
Luttinger Liquids
D. Mozyrsky, A. DEMENTSOV, and D. Tolkunov |