

Table of Contents

Committee

Preface

Session 1 - Magnetic Semiconductors

Transport Properties of (Ga,Mn)As Diluted Magnetic Semiconductors in the Bulk and in Layered Systems

I. Turek, K. Carva and J. Kudrnovsky 1

First-Principles Approach to Mn-Doped Group IV Semiconductors: Comparison with Experiments and Outlook

A. Continenza, S. Picozzi, G. Profeta, L. Ottaviano, M. Passacantando, F. D'Orazio and F. Lucari 11

A Magnetoelectric Effect in Low-Carrier Density Colossal Magnetoresistance Materials

M. Auslender 21

Isolated and Grouped Co Spins in Polycrystalline $Zn_{1-x}Co_xO$ Oxides

Y.B. Zhang, T. Sritharan and S. Li 27

A Contacting Technology to Magnetic Semiconductors

P. Banerjee and B. Ghosh 31

Transient Wigner Function Studies of DMS Barrier Devices

H.L. Grubin 36

Ferromagnetic Property of Co and Fe-Implanted ZnO Thin Film at Room Temperature

W.K. Choi, B. Angadi, H.C. Park, J.H. Lee, J.H. Song and R. Kumar 42

Fabrication and Investigation of Hybrid Device Consisting of Ferromagnetic Nanodots and Ga(Mn)As

J.Y. Chang, W.Y. Kim, S.H. Chun, M. Saphonin, V.L. Mironov, B.A. Gribkov and A.A. Fraerman 48

Session 2 - Manganites and other Enhanced Magnetoresistance and Magnetoimpedance Materials; Magnetic Tunnel Junctions

Magnetic Field Effects on Current, Electroluminescence and Photocurrent in Alq₃ Organic Light Emitting Diodes

G. Veeraghavan, T.D. Nguyen, Y.G. Sheng, O. Mermer and M. Wohlgemant 53

Exchange Biasing with YMnO₃ Epitaxial Films

J. Fontcuberta, X. Martí, F. Sánchez, D. Hrabovsky, V. Laukhin, V. Skumryev, N. Dix, M.V. García-Cuenca, C. Ferrater, M. Varela, U. Lüders and J.F. Bobo 62

Magnetoresistance of Post-Annealed Iron Nitride Related Thin Films

S. Kikkawa, K. Sakon, Y. Kawaai and T. Takeda 70

Crossover Antiferro-Superparamagnetism and Related Kondo-Like Anomalies of Resistivity in Clustered Fe/Cr Multilayers

V.V. Ustinov, L.N. Romashev, M.A. Milyaev, T.P. Krinitsina and A.M. Burkhanov 75

Structural and Magnetotransport Properties of Coherently Strained La_{2/3}Ca_{1/3}MnO₃ Epitaxial Thin Films

L. Abad, V. Laukhin, S. Valencia, M. Varela, L. Balcells and B. Martínez 81

Surface Resistance of La_{2/3}Ca_{1/3}MnO₃ Epitaxial Thin Films Grown on Top of LaAlO₃

L. Abad, B. Martínez, S. Valencia, A. Gaupp, W. Gudat and L. Balcells 87

Effect of Cr Substitution on the Crystal and Magnetic Structure of (Pr_{0.55}Ca_{0.45})MnO₃

A. Martinelli, M. Ferretti, C. Castellano, M.R. Cimberle, M. Tropeano and C. Mondelli 93

A Study on Spin Injection of Ferromagnetic Electrode for OLED Application

S.J. Kim, H.J. Lee, S.K. Kim, C.R. Cho and S.Y. Jeong 98

Metamagnetic Transitions and Stepwise GMR in Uniaxial Fe/Cr Superlattices

V.V. Ustinov, L.N. Romashev, M.A. Milyaev, T.P. Krinitsina and A.M. Burkhanov 104

Local Structure and Dynamic Properties of Mn Substituted Manganites Studied by EXAFS and Anelastic Spectroscopy

C. Castellano, A. Martinelli, M. Ferretti, M.R. Cimberle, R. Cantelli and F. Cordero 110

