

NEW MATERIALS AND COMPOUNDS

Nuclear Solid State Physics Using Ion Beams

Publications in Journals

1. FERRERO CALABUIG, J.L., MARTÍN SÁNCHEZ, A., ROLDÁN GARCÍA, C., VERA TOMÉ, F., SILVA, M.F., SOARES, J.C., JUANES BARBER, D., “Semipermeable Membrane to Retain Platinum Atoms in the Electrodeposition Process of Alpha Spectrometry Sources”, *Appl. Radiat. Isot.* **49** (1998) 1269-1272.
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9. ALVES, E., SILVA, M.F., SOARES, J.C., HENRY, M.O., GWILLIAM, R., SEALY, B.J., FREITAG, K., VIANDEN, R., STIEVENARD, A., “Lattice Site Location of Tu and Er Implanted GaAs”, *Nucl. Instr. and Methods* **B136/138** (1998) 421-425.

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3. ALVES, E., SILVA, M.F., SOARES, J.C., “Sapphire (α -Al₂O₃) Behavior under Heavy Ion Implantation”, *Proceedings of OECD/NEA Workshop on Ion and Slow Positron Beam Utilization*, Costa da Caparica, 15-18 Sept. 1998.
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5. MARQUES, J.G., KLING, A., REBOUTA, L., SILVA, M.F., SOARES, J.C., “Combined Ion Beam and Hyperfine Interaction Studies of LiNbO₃ Single Crystals”, *Proceedings of OECD/NEA Workshop on Ion and Slow Positron Beam Utilization*, Costa da Caparica, 15-18 Sept. 1998.
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9. WAHL, U., CORREIA, J.G., LANGOUCHE, G., VANTOMME, A., and the ISOLDE Collaboration, “Lattice Sites and Stability of Implanted Er in FZ and CZ Si”, *Mat. Res. Soc. Symp. Proc.* (in press).
10. ZAWISLAK, F.C., GARCIA, I.T.S., SAMIOS, D., BAPTISTA, D.I., FICHTNER, P.F.P., ALVES, E., SILVA, M.F., SOARES, J.C., “Improving the Thermal Stability of Photoresist Films by Ion Beam Irradiation”, *Mat. Res. Soc. Symp. Proc.* (in press).

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Condensed Matter Physics

Publications in Journals

in press

1. MISHEVA, M.A., DJOURELOV, N., MARGAÇA, F.M.A., MIRANDA SALVADO, I.M., “Positron Annihilation Spectroscopy Applied on Sol-Gel Prepared SiO_2 ”, *Journal of Phys.C: Condens. Matter*, (in press).

Conference Proceedings

2. SEQUEIRA, A.D., BRESSERS, J., “The Evolution of the Microstructure and Crack Propagation of CoNiCrAlY Coated Superalloys upon Thermo-mechanical Fatigue”, in *Materials in Oceanic environment of EuroMat'98*, L. Faria editor, Federation of European Materials Society, **1** (1998) 121-130.

in press

1. MARGAÇA, F.M.A., PINHÃO, N.R. and SEQUEIRA, A.D., “Design Optimisation of a High-Temperature X-ray Diffractometer for *in situ* Residual Stress Analysis and Lattice Mismatch Determination - the HOT-BIRD”, European Powder Diffraction International Conference, EPIDIC-6, Budapest, 22-26 August, 1998. Proceedings to be published in *Materials Science Forum*.
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Communications to Conferences

1. FALCÃO, A.N., “DIDE – The new ITN Neutron Diffractometer”, *11th National Physics Conference, Port. Physical Soc.*, Porto, 7-10 Setembro, 1998 (in Portuguese).
2. MARGAÇA, F.M.A., SANTOS SOUSA, J., MIRANDA SALVADO, I.M., MISHEVA, M.A., TEIXEIRA, J., “Influence of Water Content on the Microstructure of Silica prepared by Sol-Gel”, *11th National Physics Conference, Port. Physical Soc.*, Porto, 7-10 Setembro, 1998 (in Portuguese).
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6. SEQUEIRA, A.D., PINHÃO, N.R., "Electron Microscopy Image Simulation for Materials Characterization", *11th National Physics Conference, Port. Physical Soc.*, Porto, 7-10 Setembro, 1998 (in Portuguese).
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Special Publications

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