

Institute for Superconducting and Electronic Materials

2002 Refereed Publications

HTS Program

- W.M. Chen, G. Li, S.S. Jiang, H.Y. Ling, P. Yao, M.J. Qin, H.K. Liu and S.X. Dou "Transmission electron microscopy evidence for phase transformation from $\text{Bi}_2\text{Sr}_2\text{CuO}_6$ to $\text{Bi}_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10}$ " *App. Phys. Lett.* **81**, **4**, 688-690 (2002)
- W.M. Chen, H.K. Liu, X. Fu, Y.C. Guo, D. Shi and S.X. Dou "Effect of various mechanical deformation techniques on pinning force densities in Ag/Bi-2223 tapes" *Proc. Int. Cryogenic Mat. Conf.* 16-20/7/01, Eds: B. Balachandran, D. Gruber and K.T. Hartwig, 748-754 (2002)
- Z.X. Cheng, X.J. Yi, J.R. Han, H.C. Chen, X.L. Wang, H.K. Liu, S.X. Dou, F. Song and H.C. Guo "Up-conversion luminescence of ytterbium and thulium co-doped potassium yttrium double tungstate crystal" *Crys. Res. Technol.* **37**, **12**, 1318-1324 (2002)
- S.X. Dou, A.V. Pan, S. Zhou, M. Ionescu, H.K. Liu and P.R. Munroe "Substitution-induced pinning in MgB_2 superconductor doped with SiC nano-particles" *Supercond. Sci. Technol.* **15**, 1587-1591 (2002)
- S.X. Dou, S. Soltanian, J. Horvat, X.L. Wang, S.H. Zhou, M. Ionescu, H.K. Liu, P. Munroe and M. Tomsic, "Enhancement of the critical current density and flux pinning of MgB_2 superconductor by nanoparticle SiC doping" *App. Phys. Lett.* **81**, **18**, 3419-3421 (2002).
- V.V. Flambaum, G.A. Stewart, G.J. Russell, J. Horvat and S.X. Dou "The effect of hydrogenation on the superconducting transition temperature of MgB_2 " *Physica C* **382**, 213-216 (2002)
- F. Gao, R.A. Lewis, X.L. Wang, S.X. Dou "Far-infrared reflection and transmission of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ " *J. Alloys & Compounds* **347** 314-318 (2002)
- J. Horvat., X.L. Wang, S. Soltanian and S.X. Dou "Improvement of critical current in MgB_2/Fe superconducting wires by a ferromagnetic sheath" *App. Phys. Lett.* **80**, **5**, 829-831 (2002)
- M. James and J. Horvat "The crystal structure and magnetic properties of the 1-dimensional dihalide-bridged polymers dichlorobis(thiazole)cobalt(II) and dibromobis(thiazole)-cobalt(II)" *J. Phys. & Chem. of Solids* **63**, 657-663 (2002)
- Kusevic, Z. Marohnic, E. Babic, D. Drobac, X.L. Wang and S.X. Dou "Flux pinning and critical currents in polycrystalline MgB_2 " *Solid. State Commun.* **122** 347-350 (2002)
- A.H. Li, M. Ionescu, X.L. Wang, S.X. Dou and H. Wang "RE SrAl_2O_7 (RE=Nd and La): a new type of perovskite ceramic substrate for Bi-Sr-Ca-Cu-O superconducting thick films" *J. Alloys & Compounds* **333** 179-183 (2002)
- S. Li, O. Prabhakar, T.T. Tan, C.Q. Sun, X.L. Wang, S. Soltanian, J. Horvat and S.X. Dou "Intrinsic nanostructural domains: Possible origin of weaklinkless superconductivity in the quenched reaction product of Mg and amorphous B" *Appl Phys. Lett.* **81**, **5** 874-876 (2002)
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- E. Sotirova, X.L. Wang, J. Horvat, T. Silver, K. Konstantinov and H.K. Liu "Study of structure, transport, paramagnetic and ferromagnetic properties of $\text{La}_{0.8}\text{Sr}_{0.2}\text{Mn}_{1-x}\text{Zn}_x\text{O}_3$ perovskite manganite" *Supercond. Sci. Technol.* **15**, 346-350 (2002)
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Patents

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