

Adiabatic polaron transport in $\text{La}_{0.9}\text{Pb}_{0.1}\text{MnO}_3$ manganites

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Abstract: A study of single-phase $\text{La}_{0.9}\text{Pb}_{0.1}\text{MnO}_3$ compositions is presented. The temperature dependence of the EPR line intensity and resistivity evidence a spin-lattice interaction in the paramagnetic region near the Curie point. In the high temperature region a spin-spin interaction is dominant. ?? 2004 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.

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References:

1. Coey, J.M.D., Viret, M., Von Molnar, S., (1999) Adv. Phys., 48, p. 167
2. Zener, N., (1951) Phys. Rev., 82, p. 403
3. Millis, A.J., Littlewood, P.B., Shraiman, B.I., (1995) Phys. Rev. Lett., 74, p. 5144
4. Rettori, C., Rao, D., Singley, J., Kidwell, D., Oseroff, S.B., Causa, M.T., Neumeier, J.J., Schultz, S., (1997) Phys. Rev. B, 55,

p. 3083

5. Lofland, S.E., Kim, P., Dahiroc, P., Bhabat, S.M., Tyagi, S.D., Karabashev, S.G., Shulyatev, D.A., Mukovskii, Y., (1997) Phys. Lett. A, 233, p. 476
6. Shengelaya, A., Zhao, G.-M., Keller, H., Muller, K.A., (1996) Phys. Rev. Lett., 77, p. 5296
7. Shengelaya, A., Zhao, G.-M., Keller, H., Muller, K.A., (2000) Phys. Rev. B, 61, p. 5888
8. Causa, M.T., Tovar, M., Caneiro, A., Prado, F., Ibañez, G., Ramos, C.A., Butera, A., Oseroff, S.B., (1998) Phys. Rev. B, 58, p. 3233
9. Tovar, M., Causa, M.T., Ibañez, G., Ramos, C.A., Butera, A., Rivadulla, F., Alascio, B., Piñol, S., (1998) J. Appl. Phys., 83, p. 7201
10. Huber, D.L., Alejandro, G., Caneiro, A., Causa, M.T., Prado, F., Tovar, M., Oseroff, S.B., (1999) Phys. Rev. B, 60, p. 1215
11. Atsarkin, V.A., Demidov, V.V., Vasneva, G.A., Conder, K., (2001) Phys. Rev. B, 63, p. 092405
12. Oseroff, S.B., Torikachvili, M., Singley, J., Ali, S., Cheong, S.-W., Schultz, S., (1996) Phys. Rev. B, 53, p. 6521
13. Emin, D., Holstein, T., (1969) Ann. Phys., 53, p. 439
14. Shames, A.I., Rosenberg, E., McCarroll, W.H., Greenblatt, M., Gorodetsky, G., (2001) Phys. Rev. B, 64, p. 172401
15. Booth, C.H., Bridges, F., Snyder, G.J., Geballe, T.H., (1996) Phys. Rev. B, 54, pp. R15606
16. Worledge, D.C., Jeffrey Snyder, G., Beasley, M.R., Geballe, T.H., Hiskes, R., Dicarolis, S., (1996) J. Appl. Phys., 80, p. 5158
17. Coey, J.M.D., Viret, M., Ranno, L., Ounadjela, K., (1995) Phys. Rev. Lett., 75, p. 3910
18. Ziese, M., Srinitiwara Wong, C., (1998) Phys. Rev. B, 58, p. 11519

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