



DR. JAGABANDHU MANDAL

DESIGNATION

ASSOCIATE PROFESSOR, DEPARTMENT OF PHYSICS

QUALIFICATION (IN DESCENDING ORDER)

1999 : Ph.D in Experimental Solid State Physics, Saha Institute of Nuclear Physics, Calcutta University

1990 - 91 : Associateship Diploma in Physics, SINP, Kolkata.

1990 : NET (Joint CSIR/UGC), GATE

1990 : M. Sc. in Physics, Jadavpur University

WORK EXPERIENCE (IN DESCENDING ORDER)

2010 onwards : Teaching experience in the Physics Department of P D Women's College, Jalpaiguri as Associate Professor.

1997 – 2010 : Teaching experience in the Physics Department of Mathabhanga College, Coochbehar.

RESEARCH INTEREST

Experimental Solid State Physics

LIST OF PUBLICATION (IN DESCENDING ORDER)

1. "Effect of TI doping on the structural and physical properties of $\text{HgBa}_2\text{CuO}_{4+\delta}$ superconductor". B. Bandyopadhyay, **J. B. Mandal** and B. Ghosh. Physica C 298 (1998) 95.

PROFILE

CONTACT

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DATE OF JOINING:

29.04.2010

2. "Flux-pinning behavior and the interlayer coupling of the $(\text{Hg}_{0.7}\text{Cr}_{0.3})\text{Sr}_2\text{CuO}_{4+\delta}$ superconductor." Jae-Hyuk Choi, Mun-Seog Kim, Sung-Ik Lee, Su-Young Lee, In-Sang Yang, J. V. Yakhmi, **J. B. Mandal**, B. Bandyopadhyay and B. Ghosh. Phys. Rev. B 58 (1998) 538.
3. "Raman and FT-ir studies on $(\text{Hg},\text{V})(\text{La},\text{Sr})_2\text{CuO}_{4+\delta}$ and $(\text{Hg},\text{Cr})\text{Sr}_2\text{CuO}_{4+\delta}$ superconductors." B. Bandyopadhyay, **J. B. Mandal**, A. J. Pal, P. Choudhury, P. Mandal and B. Ghosh. Physica C 282-287 (1997) 1049.
4. "Raman study of the $(\text{Hg}_{0.7}\text{Cr}_{0.3})\text{Sr}_2\text{CuO}_{4+\delta}$ superconductor." Su-Young Lee, Bo-Youn Chang, In-Sang Yang, Ji-Hye Gwak, Sung-Jim Kim, Jae-Hyuk Choi, Sung-Ik Lee, J. V. Yakhmi, **J. B. Mandal**, B. Bandyopadhyay and B. Ghosh. Physica C 282-287 (1997) 1039.
5. "Two dimensional superconducting behavior of $(\text{Hg}_{0.7}\text{Cr}_{0.3})\text{Sr}_2\text{CuO}_{4+\delta}$."Jae-Hyuk Choi, Mun-Seog Kim, Sung-Ik Lee, Su-Young Lee, In-Sang Yang, J. V. Yakhmi, **J. B. Mandal**, B. Bandyopadhyay and B. Ghosh. Physica C 282-287 (1997) 2001.
6. "Neutron diffraction structural study of superconductor $(\text{Hg}_{0.7}\text{Cr}_{0.3})\text{Sr}_2\text{CuO}_{4+\delta}$ ". **J. B. Mandal**, B. Bandyopadhyay , B. Ghosh, H. Rajagopal, A. Sequeira and J. V. Yakhmi. J. Superconductivity 9 (1996) 261.
7. "Scaling of the thermoelectric power in the $\text{Bi}_2\text{Sr}_2\text{Ca}_{1-x}\text{Y}_x\text{Cu}_2\text{O}_{8+y}$ ($0 \leq x \leq 0.7$) and $\text{Tl}_2\text{Ba}_2\text{Ca}_{1-x}\text{Y}_x\text{Cu}_2\text{O}_{8+y}$ ($0 \leq x \leq 0.6$) systems". **J. B. Mandal**, A N. Das and B. Ghosh. J. Phys. : Condens. Matter 8 (1996) 3047
8. "A new mercury-based high- T_c cuprate $(\text{Hg}_{0.7}\text{V}_{0.3})(\text{Sr}_{2-x}\text{La}_x)\text{Cu}_{4+\delta}$ ".**J. B. Mandal**, B. Bandyopadhyay, F. Fauth, T. Chattopadhyay and B. Ghosh. Physics C 264 (1996) 145
9. "X-ray structure, electrical resistivity, Hall effect and thermoelectric behavior of $(\text{Hg}/\text{Cr})_1\text{Sr}_2\text{CuO}_y$ ". B. Bandyopadhyay, **J. B. Mandal**, A. Poddar, P. Choudhury and B. Ghosh. Physica B 223-224 (1996) 580
10. " $(\text{Hg}_{0.8}\text{Ti}_{0.2})\text{Sr}_2\text{Ca}_{1-x}\text{Y}_x\text{Cu}_2\text{O}_{6+y}$: a new series of mercury-based 1212 superconductors".B. Bandyopadhyay, **J. B. Mandal** and B. Ghosh. Supercond. Sci. Technol. 9 (1996) 706.
11. "Structural, transport and thermal properties of $(\text{Hg}_{0.7}\text{Cr}_{0.3})\text{Sr}_2\text{CuO}_{4+\delta}$ " B. Bandyopadhyay, **J. B. Mandal**, A. Poddar, P. Choudhury and B. Ghosh. J. Phys. : Condens. Matter 8 (1996) 1.

13. "On structural and transport properties of Hg-based high- T_c superconductors" **J. B. Mandal**, B. Bandyopadhyay, P. Mandal, P. Choudhury, A. N. Das and B. Ghosh. A review article in "STUDIES OF HIGH TEMPERATURE SUPERCONDUCTORS" Vol. 24 (Nova Science Publishers), edited by A. Narlikar.
14. "Point-contact study of $(\text{Hg}_{0.7}\text{Cr}_{0.3})\text{Sr}_2\text{CuO}_4$ " L. F. Rybaltchenko, I. K. Yanson, A. G. M. Jansen, P. Wyder, P. Mandal and **J. B. Mandal**. Physica B 218 (1996) 220.
15. "Raman scattering in $\text{ZnSe}_x\text{Te}_{1-x}$ thin films : a probe for alloy disorder" A.J. Pal and **J. B. Mandal**. J. Alloys and Compounds 216 (1994) 265.
16. "Low temperature synthesis of superconducting $\text{HgBa}_2\text{CuO}_{4+\delta}$ and its deterioration to non-superconducting phase studied by x-ray and IR methods". **J. B. Mandal**, B. Bandyopadhyay, A. Poddar, P. Choudhury and B. Ghosh. Physica C 235-240 (1994) 1107
17. "Resistivity anisotropy in the Y-substituted Bi-2212 system". **J. B. Mandal**, S. Keshri and B. Ghosh. Physica C 216 (1993) 195.
18. "Thermoelectric power of $\text{Tl}_2\text{Ba}_2\text{Ca}_{1-x}\text{Y}_x\text{Cu}_2\text{O}_{8+y}$ ($0 \leq x \leq 0.6$) samples". S. Keshri, **J. B. Mandal**, P. Mandal, S. Poddar, A. N. Das and B. Ghosh. Phys. Rev. B 47 (1993) 9048.
19. "Transport, optical properties and superconductivity in Bi- and Tl- systems". P. Mandal, A. Poddar, P. Choudhury, **J. B. Mandal**, S. Keshri, A. N. Das and B. Ghosh. Indian J. Pure & Appl. Phys. 30 (1992) 531.
20. "Thermoelectric power of the the $\text{Bi}_2\text{Sr}_2\text{Ca}_{1-x}\text{Y}_x\text{Cu}_2\text{O}_{8+y}$ ($x = 0 - 1.0$) system". **J. B. Mandal**, S. Keshri, P. Mandal, S. Poddar, A. N. Das and B. Ghosh Phys. Rev. B 46 (1992) 11840.

SEMINARS AND CONFERENCE ATTENDED (DESCENDING ORDER)

1. "Synthesis and transport properties of $\text{HgBa}_2\text{CuO}_{4+\delta}$ " **J. B. Mandal**, B. Bandyopadhyay and B. Ghosh. Proc. of the International Workshop on "High Temperature Superconductivity – Ten years after its discovery", Jaipur, India (1996).
2. "Variation of T_c and thermopower of $\text{Bi}_2\text{Sr}_2(\text{Ca}_{1-y}\text{Y}_y)(\text{Cu}_{2-x}\text{M}_x)\text{O}_8$ ($M = \text{Zn}, \text{Co}$) system" B. Bandyopadhyay, **J. B. Mandal**, P. Mandal and B. Ghosh.

Temperature Superconductivity – Ten years after its discovery”, Jaipur, India (1996).

EXTERNAL RESPONSIBILITY (ADMINISTRATIVE RESPONSIBILITIES, IF ANY)

1. Member(Higher Education Nominee), Governing Body of Ananda Chandra College of Commerce, Jalpaiguri.
2. Member, U. G. Board of Studies, NBU.