

CURRICULUM VITAE

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PERSONAL DETAILS

- Name: Moumita Patra.
- Date of Birth: 27th March, 1984.
- Current Position: Assistant Professor (Since 06.05.2010)

EDUCATION

Examination	Year of passing	Board/University	Percentage of marks obtained	Class/Division
Secondary	1999	W.B.B.S.E	81.375%	1 st
Higher Secondary	2001	W.B.C.H.S.E	80.4%	1 st
B. Sc. (Physics Hons.)	2004	University of Burdwan	65.625%	1 st
M. Sc. (Physics)	2006	University of Burdwan	77.41%	1 st
PhD (Physics)	2012	Jadavpur University	NA	NA

Academic Awards

- Awarded Gold medal in M Sc., Physics.
- Awarded Senior Research Fellowship by CSIR, India (2008-2010).
- Awarded Junior Research Fellowship by CSIR, India (2006-2008).
- Qualified in National Eligibility test (NET) from CSIR, India.

AREA OF RESEARCH

- (i) Nano, Bulk, Thin film preparation of perovskite and core-shell structure.
- (ii) Transport properties (resistivity, dielectric, magnetoresistance, specific heat measurement) and set-up preparation.
- (iii) Magnetic measurement.

LIST OF PUBLICATION

- *Paper published at Journals:*

1. [Exchange bias with Fe substitution in LaMnO₃](#)
M Patra, K De, S Majumdar, S Giri. The European Physical Journal B **58** (2007), 367-371.
Citation: 25
2. [Multifunctionality attributed to the self-doping in polycrystalline La_{0.9}MnO₃: Coexistence of large magnetoresistance and magnetocaloric effect](#)
M Patra, K De, S Majumdar, S Giri. Applied Physics Letters 94 (2009), 092506-092506-3
Citation: 17
3. [The exchange bias effect in phase separated Nd_{1-x}Sr_xCoO₃ at the spontaneous ferromagnetic/ferrimagnetic interface](#)
M Patra, M Thakur, S Majumdar, S Giri. Journal of Physics: Condensed Matter . **21** (2009), 236004
Citation: 12
4. [Exchange bias effect attributed to the spontaneous phase separation in polycrystalline Nd_{0.88}Sr_{0.12}CoO₃](#)
M Patra, S Majumdar, S Giri. Solid State Communications 149 (2009), 501-504
Citation: 10
5. [Exchange bias effect involved with tunneling magnetoresistance in polycrystalline La_{0.88}Sr_{0.12}CoO₃](#)
M Patra, S Majumdar, S Giri. EPL (Europhysics Letters) 87(2009),58002
Citation: 8
6. [Reply to comment on 'Particle size dependent exchange bias and cluster-glass states in LaMn_{0.7}Fe_{0.3}O₃'](#)
M Patra, M Thakur, K De, S Majumdar, S Giri. Journal of Physics: Condensed Matter 21, 078002
Citation: 7
7. [Exchange bias effect and intragranular magnetoresistance in Nd_{0.84}Sr_{0.16}CoO₃](#)
M Patra, S Majumdar, S Giri
Journal of Physics: Condensed Matter 21(2009), 486003
Citation: 6
8. [Spin polarized tunneling magnetoresistance in the self-doped manganite LaMnO₃](#)
M Patra, A Roy, K De, S Majumdar, S Giri Applied Physics Letters 94(2009), 212107
Citation: 3

9. [Grain size effect on the magnetic cluster-glass properties of \$\text{La}_{0.88}\text{Sr}_{0.12}\text{CoO}_3\$](#)
M Patra, S Majumdar, S Giri Journal of Physics: Condensed Matter 22(2010), 116001
Citation: 8
10. [Anomalous magnetic field dependence of magnetocaloric effect at low temperature in \$\text{Pr}_{0.52}\text{Sr}_{0.48}\text{MnO}_3\$ single crystal](#)
M Patra, S Majumdar, S Giri, GN Iles, T Chatterji Journal of applied physics 107 (2010), 076101
Citation: 6
11. [Cluster-glass-like state and exchange bias effect in spontaneously phase separated, \$\text{Pr}_{0.7}\text{Sr}_{0.3}\text{CoO}_3\$](#)
M Patra, S Majumdar, S Giri. Journal of Applied Physics 107 (2010), 033912
Citation: 4
12. [Exchange bias effect in alloys and compounds](#)
S Giri, **M Patra**, S Majumdar. Journal of Physics: Condensed Matter 23(2011), 073201
Citation: 27
13. Anisotropic Magnetocaloric Effect in Single-crystalline $\text{Pr}_{0.52}\text{Sr}_{0.48}\text{MnO}_3$
M Patra, S Majumdar, S Giri, GN Iles, T Chatterji Journal of superconductivity and novel magnetism 24 (2011), 775-777
14. Magnetocaloric effect in RAl_2 (R = Nd, Sm, and Tm): Promising for cryogenic refrigeration close to liquid helium temperature
M Patra, S Majumdar, S Giri, Y Xiao, T Chatterji Journal of Alloys and Compounds 531(2012), 55
15. [Spin-glass like features in cluster-glass compounds \$\text{La}_{1-\delta}\text{Mn}_{0.7}\text{Fe}_{0.3}\text{O}_3\$](#)
K De, **M Patra**, S Majumdar, S Giri. Journal of Physics D: Applied Physics 40(2007), 7614
Citation:16
16. Asymmetrical phase separation in $\text{Nd}_{0.25}\text{La}_{0.25}\text{Ca}_{0.5}\text{MnO}_3$
K De, **M Patra**, S Giri, S Majumdar. Solid state communications 142 (2007), 457-461
17. [Particle size dependent exchange bias and cluster-glass states in \$\text{LaMn}_{0.7}\text{Fe}_{0.3}\text{O}_3\$](#)
M Thakur, **M Patra**, K De, S Majumdar, S Giri. Journal of Physics: Condensed Matter 20(2008), 195215
Citation:19
18. [Exchange bias in La-deficient cluster-glass compound \$\text{La}_{0.87}\text{Mn}_{0.7}\text{Fe}_{0.3}\text{O}_3\$](#)
K De, **M Patra**, S Majumdar, S Giri. Journal of Physics D: Applied Physics 41(2008), 175007
Citation: 6

19. [Coexistence of superparamagnetic and superspin glass behaviors in Co₅₀Ni₅₀ nanoparticles embedded in the amorphous SiO₂ host](#)
M Thakur, **M Patra**, S Majumdar, S Giri. Journal of Applied Physics 105 (2009), 073905
Citation: **19**
20. [Influence of cooling field on the magnetic properties of Ni/NiO nanostructure](#)
M Thakur, **M Patra**, S Majumdar, S Giri. Journal of Alloys and Compounds 480 (2009), 193
Citation: **12**
21. [Exchange bias effect at the irregular interfaces between Co and CoO nanostructures](#)
S Das, **M Patra**, S Majumdar, S Giri. Journal of Alloys and Compounds 488 (2009), 27
Citation: **8**
22. Glassy magnetic phase driven by short-range charge and magnetic ordering in nanocrystalline La_{1/3} Sr_{2/3} FeO_{3-δ}: Magnetization, Mössbauer, and polarized neutron studies
S Sabyasachi, **M Patra**, S Majumdar, S Giri, S Das, VS Amaral, O Iglesias, W ...
Physical Review B 86 (2012), 104416
23. Iron nanoparticles from an electrochemical route
R Ray, S Das, **M Patra**, M Thakur. Nanoscience Methods 1 (2012), 1
24. Ligand centered radical pathway in catechol oxidase activity with a trinuclear zinc-based model: Synthesis, structural characterization and luminescence properties
Sukanta Pal, Biswajit Chowdhury, **Moumita Patra**, Milan Maji, Bhaskar Biswas. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 144 (2015/6/5), 148-154
25. Synthesis and Characterization of a Flower-Structured Ferromagnetic Nickel Oxide Nanoparticle: Investigation of Photocatalytic Activity,
Dhananjay Dey, Subrata Das, **Moumita Patra**, Niranjana Koley, Bhaskar Biswas
Journal of Organic & Inorganic Chemistry, 1(2015), 1
26. A perfectly linear trinuclear zinc–Schiff base complex: Synthesis, luminescence property and photocatalytic activity of zinc oxide nanoparticle
Dhananjay Dey, Gurpreet Kaur, **Moumita Patra**, Angshuman Roy Choudhury, Niranjana Koley, Bhaskar Biswas Inorganica Chimica Acta, 421 (2014/9/1), 335-341
27. Tuning of magnetocaloric effect in Pr_{0.5}Sr_{0.5}MnO₃ with minimal Cr substitution,
M Patra, S Majumdar, S Giri, Physica B: Condensed Matter, 448 (2014/9/1), 297-299.
28. Size effect on magnetic phase coexistence in Pr_{0.5}Sr_{0.5}Mn_{1-x}Cr_xO₃
M Patra, Sk Sabyasachi, S Majumdar, S Giri, A Kumar, SM Yusuf, V Siruguri, Materials Research Express, 1, 2014/8/27, 036109.
29. Magnetic, magnetocaloric and magnetoresistive properties of cubic Laves phase HoAl₂ single crystal, **M Patra**, S Majumdar, S Giri, Y Xiao, T Chatterji, Journal of Physics: Condensed Matter 26, 4, (2014/1/8) 046004.

30. Synthesis, structural characterization and biological activity of a trinuclear zinc (II) complex: DNA interaction study and antimicrobial activity, Bhaskar Biswas, Nirranjan Kole, **Moumita Patra**, Shampa Dutta, Mousumi Ganguly, Journal of Chemical Sciences, 125,6 (2013/11/1)1445-1453

31. Constricted double loop hysteresis and exchange bias attributed to the surface anisotropy in nanocrystalline $\text{La}_{1/3}\text{Sr}_{2/3}\text{Fe}_{1-x}\text{Cr}_x\text{O}_3$, Sk Sabyasachi, M Patra, S Majumdar, S Giri, Journal of Magnetism and Magnetic Materials, 344, (2013/10/1)20-24

Conferences:

1. Exchange bias with Fe substitution in LaMnO_3

M. Patra, K. De, S. Majumdar, and S. Giri, 52nd DAE Solid State Physics Symposium, December 27-31, 2007, University of Mysore, Mysore, India. **(Poster Presentation)**

2. Large magnetocaloric effect in the self doped manganite $\text{La}_{0.9}\text{MnO}_3$.

M. Patra, K. De, S. Majumdar, and S. Giri, Indo-Singapore Joint Physics Symposium, 2009, January 6-8, 2009, S.N.B.N.C.B.S, JD Block, Sector III, Salt Lake, Kolkata - 700098, India. **(Poster Presentation)**

3. Exchange bias effect involved with tunneling magnetoresistance in polycrystalline $\text{R}_{1-x}\text{Sr}_x\text{CoO}_3$ (R = La, Nd).

M. Patra, S. Majumdar, and S. Giri, Foundation Day In-house Symposium, 2009, July 29, Indian Association for the Cultivation Of Science, Jadavpur, Kolkata - 700 032, India. **(Poster Presentation)**

4. Multifunctionality attributed to the self doping in $\text{La}_{0.9}\text{MnO}_3$.

M. Patra, S. Majumdar, and S. Giri, Colloquium for Young Physicists, 2009, August 20-21, 2009, Lecture Hall, Saha Institute Of Nuclear Physics, 1/AF Bidhannagar, Kolkata -700 064, India. **(Oral Presentation)**

5. Anisotropic Magnetocaloric effect in Single crystalline $\text{Pr}_{0.48}\text{Sr}_{0.52}\text{MnO}_3$.

M. Patra, S. Majumdar, and S. Giri, International Conference on Superconductivity and Magnetism, 2010, 25-30 April 2010, Antalya, Turkey **(Poster Presentation)**