

## BIO-DATA



### Research Work

**NAME:** Mahadev Rangnath Sonawane

**Date of Birth:** 05/06/1970

**Residential and Correspondence Address:** A- 403, Suyog Samuha CHS Ltd,  
Sector -8, Sanpada, Navi Mumbai-400705

**Working in:** The Institute of Science, Mumbai  
15 Madam Cama Road, Fort, Mumbai-400032

**Designation:** Assistant Professor

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### Educational Qualification

Sr. No.	Degree/Subject	University
1	B. Sc. Physics	University of Pune
2	D. L. L. & L. W.	University of Pune
3	M. Sc. Physics	University of Pune
4	B. Ed. Physics & Mathematics	University of Pune
5	Ph. D. Physics	<b>University of Mumbai</b>

## **Topic of Research:**

- 1) Modeling and Simulation: Carbon Nanotubes, Absorption Gas molecules, Hydrogen storage – Using Density Functional Theory (DFT).
- 2) Dielectric Properties of Solids and Liquids: Microwave X-band Bench Method
- 3) Materials for Supper Capacitors

## **Publications:**

### **Journals:**

- i. International Journal of Applied Physics and Mathematics (IJAPM) Vol. 1 NO. 2, September 2011.  
M. R. Sonawane, Darshan Habale, B. J. Nagare and Rita Gharade.
- ii. Applied Mechanic and Materials (AMM) Vols. No. 110-116, pp 315-320 (2012) (Trans Tech Publications)  
M. R. Sonawane and B. J. Nagare.
- iii. Advanced Material Research (AMR) Vol. No. 678, pp 179 – 184, March 2013. (Trans Tech Publications)  
M. R. Sonawane, Darshan Habale and B. J. Nagare.
- iv. IEEE, 978-1-4577-2037-6/11, 2011  
Darshan Habale, M. R. Sonawane and B. J. Nagare
- V. Int. Res. J. of Science & Engineering, 2018; Special Issue A2: 13-19  
SJIF Impact Factor 4.11 UGC Approved Journal No. 63628  
Nirmal Sangeeta A<sup>1</sup>, Sonawane M.R.<sup>2</sup> and Atram R.G.<sup>2</sup>
- vi. Int. Res. J. of Science & Engineering, 2018; Special Issue A1: 109-116  
SJIF Impact Factor 4.11 UGC Approved Journal No. 63628

Nirmal Sangeeta A<sup>1</sup>, Sonawane M.R.<sup>2</sup> and Atram R.G.<sup>2</sup>

vii. International Journal of Scientific Research in Science and Technology

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Viii Materials Physics and Mechanics, 42 (2019) 280-287

R.G. Atram, M.R. Sonawane\*

iX Biopolymers – Wiley 112(8) 9 July, 2021 Electronic characteristics of BRCA1 mutations in DNA

Lijun He<sup>1</sup> | Jinsha Zhang<sup>1</sup> | Chengyun He<sup>1</sup> | Boyang Zhao<sup>1</sup> | Zhiyang Xie<sup>1</sup> |

Weizhong Chen<sup>1</sup> | Mahadev R. Sonawane<sup>2</sup> | Sunil R. Patil<sup>3</sup>

### **Publications:**

### **Proceeding:**

i. IEEE, 978-1-4244-9817-8, 2011 (**China**).

ii. Advance Nano Materials for Industrial Application, pp 369 – 378 ©

Bloomsbury Publishing India Pvt. Ltd.

M. R. Sonawane, Darshan Habale, B. J. Nagare, Rita Gharade and R.G. Atram.

14. Books/Reports/Chapters/General articles etc.

i Chemisorption of Transition Metals on Carbon Nanotube (8, 0) using Density Function Theory.

Dr. M. R. Sonawane, Dr. Sangeeta Anilkumar Nirmal, Dr. R.G. Atram

The Institute of Science in collaboration with SURE Foundation

Recent Trends in Nano Materials towards the Sustainable Developments in Energy & Environment P (69-74) ISBN: 978-81-956624-0-12022

- ii Fukui functions of SO<sub>2</sub> on Silicon doped (8, 0) Carbon Nanotube: Density functional study.

M. R. Sonawane

The Institute of Science in collaboration with SURE Foundation

Recent Trends in Nano Materials towards the Sustainable Developments in Energy & Environment P (75-79) ISBN: 978-81-956624-0-12022

### **Conference Presentations (ORAL):**

- i. International Symposium on Macro and Super Molecular Architecture and Materials (MAM – 12), Center for Nano Science and Technology and Rangasamy College of Technology, Tiruchengode (Tk.) Namakkal (Dt.), Tamil Nadu, India and World Class University (WCU) GIST, **South Korea** 5<sup>th</sup> - 8<sup>th</sup> Nov. 2012.
- ii. International Conference on Nano Science and Nanotechnology, (ICNN-2011, Coimbatore Institute of Technology, Coimbatore, Tamil Nadu, India and Center for research and advanced Studies IPN, Cinvestav, **Mexico** 6<sup>th</sup> – 8<sup>th</sup> July 2011.
- iii. International conference for applied Physics and Mathematics (ICAPM – 2011), RMK Engineering College, Chennai, India, Singapore Institute of Electronics, Singapore and IACSIT, **China**, 29<sup>th</sup> – 30<sup>th</sup> April 2011.

### **Referee:**

- i) New Journal of Chemistry: Royal Society of Chemistry, London, **UK**
- ii) Canadian Journal of Chemistry: **Canada**
- iii) National Conference on Machine Learning NCML-2019  
Organized by **Amity University, Mumbai** 26<sup>th</sup> March 2019

### **Guest Editor:**

- i) The Guest Editor for the Special Issue  
“Advances in Transition Metal Dichalcogenide Materials”

in the journal “Advances in Materials (AM); ISSN: 2327-2503 (Print);  
ISSN: 2327-252X (Online);

<http://www.sciencepublishinggroup.com/j/am>”.

Science Publishing Group 1 Rockefeller Plaza, 11th Floors, New York,  
NY 10020 U.S.A.

**Thesis Title: -**

First-Principle Calculation of Metal-doped Nanotube and their Reactivity toward small gaseous molecules in the atmosphere.