

BIO-DATA



A. Personal Information

1. **Name** : Dr. Swapnil Jinendra Rajoba
2. **Educational Qualification** : M. Sc. Ph. D.
3. **Area of Research** : Nano materials, Lithium ion batteries, Fuel Cell (SOFC), Graphene Oxide and Metal Oxide
4. **Contact number** : 8888609870/91682018108
5. **Email ID** : swapnilrajoba@gmail.com
6. **Department** : Physics
7. **Designation** : Assistant Professor
8. **Date of Appointment** : 18 June 2019
9. **Experience** : 1 Year

B. Title of Dissertation /Thesis : “SYNTHESIS AND CHARACTERIZATION OF GRAPHENE OXIDE – LiFePO₄ COMPOSITE CATHODE FOR LITHIUM ION BATTERIES”

C.Publications :

1. Book: 0

2. Papers Published in International Journal:

1. Anil A. Kashale, Akash S. Rasal, Gokul P. Kamble, Vijay H. Ingole, Pravin K. Dwivedi, **Swapnil J. Rajoba**, Lata D. Jadhav, Yong-Chien Ling, Jia-Yaw Chang, Anil V. Ghule “Biosynthesized Co-Doped TiO₂ Nanoparticles based Anode for Lithium-Ion Battery Application and Investigating the Influence of Dopant Concentrations on its Performance”, Composites Part B **167** (2019) 44-50. (I. F. = **6.86**).
2. **Swapnil J. Rajoba**, Lata D. Jadhav, Ramchandra S. Kalubarme, Sanket N. Yadav, “Influence of synthesis parameters and graphene oxide on the physicochemical and electrochemical properties of LiFePO₄ for Li-ion battery”, Journal of Alloys and Compounds, **774** (2019) 841-847. (I. F. = **4.17**).
3. **Swapnil J. Rajoba**, Shrikrishna D. Sartale, Lata D. Jadhav, “Investigating functional groups in GO and r-GO through spectroscopic tools and effect on optical properties”, Optik - International Journal for Light and Electron Optics, **175** (2018) 312–318. (I. F. = **1.91**).

4. **Swapnil J. Rajoba**, Lata D. Jadhav, Ramchandra S. Kalubarme, Pramod S. Patil, S. Varma, B.N. Wani “Electrochemical performance of LiFePO₄/GO composite for Li-ion battery”, *Ceramic International*, **44** (2018) 6886-6893. **(I. F. = 3.45)**.
5. **S. J. Rajoba**, L. D. Jadhav, P. S. Patil, D. K. Tyagi, S. Varma, B. N. Wani, “Enhancement of Electrical Conductivity of LiFePO₄ by Controlled Solution Combustion Synthesis”, *Journal of Electronic Materials*, **46** (2017) 1683-1691. **(I. F. = 1.79)**.
6. S. T. Jadhav, **S. J. Rajoba**, S. A. Patil, S. H. Han, L. D. Jadhav, “Temperature-Dependent Photoluminescence of Graphene Oxide”, *Journal of Electronic Materials*, **45** (2016) 379-385. **(I. F. = 1.79)**.

3. Papers Published in National Journal:

1. **S. J. Rajoba**, L. D. Jadhav, S. Varma, B. N. Wani, S. R. Bharadwaj, “Structural morphological and electrical studies of LiFePO₄ synthesized by solution combustion method”, 5th International Conference on Advances in Energy Research, Compendium of Papers, p. 231.
2. L. D. Jadhav, **S. J. Rajoba**, B. N. Wani, Salil Varma, D. K. Tyagi, “Synthesis and Characterization of LiFePO₄ Prepared by Combustion method”, 6th interdisciplinary symposium on materials chemistry (ISMC 2016) p.181. ISSN 2394-5087.
3. **S. J. Rajoba**, S. T. Jadhav, L. D. Jadhav, “Optical Properties of Graphene Oxide and Thermally Reduced Graphene Oxide”, 6th interdisciplinary symposium on materials chemistry (ISMC 2016) p.141. ISSN 2394-5087.

4. Papers presented in International conference:

1. **S. J. Rajoba**, L. D. Jadhav, S. Varma, B. N. Wani, S. R. Bharadwaj, “Structural morphological and electrical studies of LiFePO₄ synthesized by solution combustion method”, 5th International Conference on Advances in Energy Research, 15th to 17th December 2015, Indian Institute of Technology Bombay, Mumbai, India.
2. L. D. Jadhav, **S. J. Rajoba**, S. T. Jadhav, “Reduced graphene oxide by electro deposition for supercapacitor application”, Indo-German workshop on

Electrochemical storage systems: synergy of material design and modelling, 17th to 20th February 2016, Indian Institute of Technology, Kharagpur.

3. **S. J. Rajoba**, S. T. Jadhav, L. D. Jadhav, “Optical Properties of Graphene Oxide and Thermally Reduced Graphene Oxide”, 6th Interdisciplinary Symposium on Materials Chemistry (ISMC-2016), 6th to 10th December 2016, Chemistry Division, Bhabha Atomic Research Centre, Mumbai.
4. L. D. Jadhav, **S. J. Rajoba**, B. N. Wani, Salil Varma, D. K. Tyagi, “Synthesis and Characterization of LiFePO₄ Prepared by Combustion method”, 6th Interdisciplinary Symposium on Materials Chemistry (ISMC-2016), 6th to 10th December 2016, Chemistry Division, Bhabha Atomic Research Centre, Mumbai.
5. **S. J. Rajoba**, S. Varma, B. N. Wani, L. D. Jadhav, “Effect of Fe₂P and carbon on the electrical properties of LiFePO₄”, International Conference on Advanced Rechargeable Batteries & allied Materials-2017 (ICARBM-2017), 8th to 10th March 2017, C-MET, Pune.
6. S. Yadav, **S. J. Rajoba**, P. S. Patil, L. D. Jadhav, “Synthesis and characterization of NaFePO₄ by controlled solution combustion synthesis” International Conference on Advanced Rechargeable Batteries & allied Materials-2017 (ICARBM-2017), 8th to 10th March 2017, C-MET, Pune.
7. **S. J. Rajoba**, L. D. Jadhav, R. S. Kalubarme, S. Varma, B. N. Wani, “Effect of graphene oxide on the morphological, structural and electrochemical properties of LiFePO₄ for Li ion battery”, JNCASR-I2CAM School-2017 on Clean and Renewable Energy Technologies via Chemical Route, 27th to 2nd Dec. 2017, Bangalore.
8. **S. J. Rajoba**, C. U. Mulik, L. D. Jadhav, R. S. Kalubarme, S. Varma, B. N. Wani, “Effect of graphene oxide on the morphological, structural and electrochemical properties of LiFePO₄ for Li-ion battery”, International Conference on Applied Nanotechnology & Nanoscience-2017 (ICANN-2017), 07th to 09th Dec. 2017, Baramati (Pune).
9. **S. J. Rajoba**, L. D. Jadhav, R. S. Kalubarme, S. Varma, B. N. Wani, “Enhancement in the electrochemical properties of LiFePO₄ by forming its composite with GO for Li-ion batteries”, International Conference on

Electrochemistry in Advanced Materials, Corrosion and Radio pharmaceuticals, (CEAMCR-2018), BARC Mumbai, 15th to 17th Feb. 2018.

10. R. K. Satwekar, **S. J. Rajoba**, L. D. Jadhav, “Silver coated magnetic Nanoparticles with Enhanced Electrochemical Performance for Novel Electrode for Full Cell Lithium Ion Batteries”, International Conference on Electrochemistry in Advanced Materials, Corrosion and Radio pharmaceuticals, (CEAMCR-2018), BARC Mumbai, 15th to 17th Feb. 2018.
11. **S. J. Rajoba**, L. D. Jadhav, R. S. Kalubarme, S. Varma, B. N. Wani, “Sol-gel assisted spinel $\text{Li}_4\text{Ti}_5\text{O}_{12}$ anode for long life lithium ion battery application”, International Meeting on Energy Storage Devices and Industry-Academia Conclave (IMESD-2018), IIT Roorkee, 10th to 12th Dec. 2018.
12. C. U. Mulik, **S. J. Rajoba**, L. D. Jadhav, “Structural morphological and electrical properties of $\text{LiFe}_x\text{Mn}_{1-x}\text{PO}_4$ synthesized by combustion method for lithium ion battery application”, International Meeting on Energy Storage Devices and Industry-Academia Conclave (IMESD-2018), IIT Roorkee, 10th to 12th Dec. 2018.
13. S. N. Yadav, **S. J. Rajoba**, R. S. Kamat, P. S. Patil, L. D. Jadhav, “Electrochemical performance of NaFePO_4 synthesized by solution combustion method”, International Meeting on Energy Storage Devices and Industry-Academia Conclave (IMESD-2018), IIT Roorkee, 10th to 12th Dec. 2018.

5. National conference:

1. **S. J. Rajoba**, A. P. Jamale, S. T. Jadhav, S. P. Patil, S. U. Dubal, L. D. Jadhav “Solution Combustion Synthesis of LiFePO_4 Nanoparticles as Cathode for Li-ion Batteries”, UGC sponsored national conference on MATERIALS FOR FUTURE TECHNOLOGY 26th to 27th February 2014, Department of Physics, Rajaram College, Kolhapur.
2. **S. J. Rajoba**, L. D. Jadhav, R. S. Kalubarme, S. Varma, B. N. Wani, “Electrochemical performance of LiFePO_4 by controlled solution combustion synthesis”, 12th National conference on solid state ionics (NCSSI-12), BITS, Pilani (Rajasthan), 21st to 23rd Dec. 2017.

3. **S. J. Rajoba**, L. D. Jadhav, R. S. Kalubarme, S. Varma, B. N. Wani, "Synthesis and electrochemical performance of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ for lithium ion battery application", National Conference on Advanced Materials Synthesis, Characterization and Applications (AMSCA-2018), Savitribai Phule Pune University, 14th to 15th Dec. 2018.
4. **S. J. Rajoba**, L. D. Jadhav, "Influence of graphene oxide on the electrochemical performance of LiFePO_4 for Li-ion battery", One day national conference on Science and Technology for Sustainable Development, Jaysingpur College Jaysingpur, 20th Jan. 2019.

6. Workshop:

1. Awareness workshop of UGC-DAE Consortium for Scientific Research, held at Rajaram College, Kolhapur, 20th to 21 Feb. 2015.
2. DAE-BRNS first workshop on thermal analysis (THERMAWORK-2016), held at Bhabha Atomic Research Centre, Mumbai, 20th to 21th Dec. 2016.
3. Familiarization Workshop on Patents and IPR, organized by Rajaram College, Kolhapur, 8th Feb. 2017
4. INUP Familiarization workshop on Nanofabrication Technologies, held at IIT Bombay, Mumbai, 22th to 24th May 2017.
5. NCPRE Familiarization workshop on Photovoltaics, held at IIT Bombay, Mumbai, 24th May 2017.

F. Research Project:

Junior (**JRF**) and Senior Research Fellow (**SRF**) on major research project of Board of Research in Nuclear Sciences (BRNS) entitled "Studies on $\text{LiFePO}_4/\text{rGO}$ nano-composite cathode for improved electrochemical performance of lithium ion battery"

G. Research Guidance: M.Phil. / Ph.D.: 0