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 **CURRICULUM VITAE**

**PERSONAL INFORMATION**

**Father Name** Shoyebmohamad Fattemohamad Shaikh

**Date of Birth** 15-06-1983

**Passport**  J2164675

**Nationality** Indian

**Mobile Number** +91-8793982180

**Email**  *shoyeb.chemist@gmail.com*

**Permanent address** F. R. Villa, Subhedar Wasti, Shrirampur-413-709,

Ahmednagar,Maharashtra, India

**ACADEMIC QUALIFICATION**

**PhD Clean Energy & Chemical Engineering-(2011-2015)**

University of Science & Technology,

Daejeon, South Korea

**TOPIK 1-July 2014**

Seoul, South Korea

Marks Obtained: 73.00%

**TOEIC-September 2014**

ETS, South Korea

Marks Obtained: 73.00%

**MSc Organic Chemistry-(2007-2009)**

AKI’S Poona College, University of Pune, India

Marks Obtained: 68.70%

**BSc Chemistry-(2002-2005)**

R.B.N.B. College, University of Pune, India

Marks Obtained: 71.08%

**H.S.C-(2000-2002)**

R.B.N.B. College, Pune Board

Marks Obtained: 50.00%

**S.S.C Matriculation (Science)-(1997-1999)**

S.V.M High School, Pune Board

Marks Obtained: 57.73%

**OTHER PROFESSIONAL CERTIFICATION**

* **Maharashtra State Eligible Test (SET)** for Lectureship in Chemical Sciences, December 2010, Conducted by University of Pune as the State Agency.
* **English Typewriting Certificate**, November 2005, from Maharashtra State Council of Examinations Pune, Pune.
* **Certificate in Information technology (MS-CIT),** October 2005, from Maharashtra State Board of technical Education, Mumbai.

**RESEARCH EXPERIENCE**

 **Assistant Professor (Chemistry)-** 15 February 2019 Onward

College of science, Department of Chemistry

King Saud University, Riyadh, Saudi Arabia.

**Dr. D. S. Kothari Post Doc. Fellow-**1 December 2016-30 January

Center for nanomaterial’s and energy devices,

School of Physical Sciences,

S. R. T. M. University, Nanded-431-606, India.

 **Post Doc. (Researcher)**-1 September 2015-1 August 2016

Department of Materials Science and Engineering,
 Yonsei University, Seoul 120-749, South Korea.

**Visiting Scientist-**1 March-30 May 2015.

Korea Institute of Science & Technology (KIST),

Seoul, 136-791, South Korea.

**Research Assistant-**1September2011-10 February 2015.

Korea Institute of Science & Technology (KIST),

Seoul, 136-791, South Korea.

**RESEARCH INTERESTS**

* Design and development of novel inorganic nano-materials for application in inorganic/ organic hybrid photovoltaic solar cell. Processing techniques include wet chemical Method, hydrothermal growth, electrochemical deposition, successive ionic layer adsorption and reaction method, and self-assembly. The research emphasis is to achieve novel properties for various applications through control of nanostructure, and atomic engineering of materials through processing and composition design.
* Interfacial and band gap engineering of hybrid perovskite solar cells.

**AWARD AND EXCELLENCE**

* **Dr. D. S. Kothari Post doc. Fellowship** for the year 2016-2019, awarded by University Grants Commission, Government Of India, at S. R. T. M. University, Nanded, Maharashtra, India.
* ‘D-sorbitol-induced phase control of TiO2 nanoparticles and its application for dye-sensitized solar cell’ received **6258 article view** in 2016, placing it as one of **the top 100 read scientific Reports articles in 2016.**
* **B.K 21 Plus Post doc. Fellowship** for the year 2015-2016, awarded by Ministry of Science and Technology, South Korea, at Yonsei University, Seoul, South Korea.
* **Visiting Scientist Fellowship,** 2015, Korea Institute of Science and Technology (KIST), Seoul, South Korea.
* **Excellence Award** **of Paper Field Award on** 25th Aug. 2015, awarded by The University of Science and Technology (UST), Seoul, South Korea.
* **R &D Academic Excellence Award** on 10th Feb. 2015, Awarded by Korea Institute of Science and Technology (KIST), Seoul, South Korea.
* International R&D Academy **Doctoral Fellowship** (2011-2015), Korea Institute of Science and Technology (KIST), Seoul, South Korea.

**EXPERIMENTAL & ANALYTICAL SKILLS**

* **Material deposition techniques**

Electrodeposition

Electrospray

Hydrothermal method

Chemical bath deposition

Successive ionic layer deposition

* **Characterization Techniques**

X-Ray Diffraction

Electron Microscopy (FE-SEM, HR-TEM)

Atomic Force Microscopy (AFM)

Magnetic Properties (MFM, VSM)

DTA-TGA Analysis

Raman Spectrophotometry

UV-Vis Spectroscopy

FTIR Spectroscopy

**COMPUTER KNOWLEDGE**

* MS Office
* Origin Pro
* Z-View
* Chem Office
* End Note
* I-gor Program

**POROJECTS**

**Thesis PhD**

“Chemical synthesis of metal oxides for DSSCs application: Effect of Interfacial surface modification on power conversion efficiency”

**Research Publications and related information**

***h* index:** 10.

***i*10 index:**12.

**Research Articles:** 33.

**Total citations**: 249.

1. N. M Shinde, Q. X. Xia, J. M. Yun, P.V Shinde, **Shoyebmohamad F. Shaikh,** R. K Sahoo, S. Mathur, R. S Mane, K. H. Kim Ultra-rapid chemical synthesis of mesoporous Bi2O3 micro-sponge-balls for supercapattery applications, *Electrochimica Acta,* 296, 2019, 308-316(**Times Cited: 0; Impact Factor: 4.08).**
2. B. G Ghule, **Shoyebmohamad F Shaikh,** N. M Shinde, S. S Sangale, P. V Shinde, R. S Mane, Promoted room-temperature LPG gas sensor activities of graphene oxide@ Fe2O3 composite sensor over individuals, *Mater. Res. Express,* 5, 2018, 125001. (**Times Cited: 0; Impact Factor: 1.06).**
3. **Shoyebmohamad F Shaikh,** B. G. Ghule, U. T Nakate, P. V Shinde, S. U Ekar, C. O’Dwyer, K. Ho Kim, R. S Mane, Low-Temperature Ionic Layer Adsorption and Reaction Grown Anatase TiO2 Nanocrystalline Films for Efficient Perovskite Solar Cell and Gas Sensor Applications, *Scientific Report,* 8:11016, 2018, 1-11. (**Times Cited: 0; Impact Factor: 5.57).**
4. S. D Raut, V. V Awasarmol, B. G. Ghule, **Shoyebmohamad F Shaikh,** S. Gore, R. P. Sharma, P. P. Pawar, R. S. Mane, Enhancement in room-temperature ammonia sensor activity of size-reduced cobalt ferrite nanoparticles on γ-irradiation, *Material Research Express, 5*, 2018, 065035 **(Times Cited: 0; Impact Factor: 1.06).**
5. S. D. Raut, V. V. Awasarmol, Shoyebmohamad F. Shaikh, B. G. Ghule, S. U. Ekar, R. S. Mane, and P. P. Pawar, Study of gamma ray energy absorption and exposure buildup factors for ferrites by geometric progression fitting method, Radiation effect and defects in solids, 5, 2018, 035702 (Times Cited: 0; Impact Factor: 0.5).
6. **Shoyebmohamad F. Shaikh,** Hyeok-Chan Kwon, Wooseok Yang, Rajaram S. Mane and Jooho Moon, Performance enhancement of mesoporous TiO2-based perovskite solar cells by ZnS ultrathin-interfacial modification layer, Journal of Alloys and Compounds, 738, 2018, 405-414. **(Times Cited:2; Impact Factor: 3.10).**
7. S. D. Raut, V. V. Awasarmol, B. G. Ghule, **Shoyebmohamad F. Shaikh**, S. K. Gore, R. P. Sharma, P. P. Pawar, and R. S. Mane, γ-irradiation induced zinc ferrites and their enhanced room temperature ammonia gas sensing properties, *Mater. Res. Express,* 5, 2018, 1-11. **(Times Cited: 1; Impact Factor: 1.06).**
8. S. D. Wagmare, V. V. Jadhav, **Shoyebmohamad F. Shaikh**, R. S. Mane, J. H. Rhee, C. O’Dwyer, sprayed tungsten-doped and undoped bismuth ferrite nanostructured films for reducing and oxidizing gas sensor applications, Sensors and Actuators A, 271, 2018, 37-43. **(Times Cited: 1; Impact Factor: 2.78).**
9. P. V. Shinde, B. G. Ghule, N. M. Shinde, Q. X. Xia, **Shoyebmohamad F. Shaikh,** A. V. Sarode, R. S. Mane, K. H. Kim, Room-temperature successive ion transfers chemical synthesis and the efficient acetone gas sensor and electrochemical energy storage applications of Bi2O3 nanostructures, *New Journal of Chemistry,*42, 2018, 12530-12538. **(Times Cited: 0; Impact Factor: 3.26).**
10. T. A. J. Siddiqui, B. G. Ghule, **Shoyebmohamad F. Shaikh,** P. V. Shinde, K. C. Gunturu, P. K. Zubaidha, J. M. Yun, C. O’Dwyer, R. S. Mane, and K. H Kim, *RSC Advance*, 8,2018,17373-17379. **(Times Cited: 1; Impact Factor: 3.10).**
11. Mu. Nausad, M. R. Khan, S. S. Bhande, **Shoyebmohamad F. Shaikh,** S. M. Alfadul, P. V. Shinde, and R. S. Mane, High current density cation-exchaned SnO2-CdSe/ZnSe and SnO2-CdSe/SnSe quantum-dot photoelectrochemical cells, *New Journal of Chemistry,*42, 2018, 9028-9036. **(Times Cited: 0; Impact Factor: 3.26).**
12. S. U. Ekar, P. N. Wani, **Shoyebmohamad F. Shaikh,** U. T. Nakate, B. G. Ghule, P. V. Shinde, S. D. Raut, V. V. Jadhav, Y. B. Khollam, H. B. Sonawane,R. S. Mane, Cl2 gas sensing properties of Ag-Sensitized TiO2 films prepared from Bio-inspired nanocrystalline TiO2, *International journal of chemical and physical sciences,*7, 2018, 62-68. **(Times Cited: 0; Impact Factor: 0.0).**
13. Shyam K. Gore, Santosh S. Jadhav, Umakant B. Tumberphale, **Shoyebmohamad F. Shaikh,** Mu Naushad, Rajaram S. Mane, Cation distribution, magnetic properties and cubic-perovskite phase transition in bismuth-doped nickel ferrite, Solid State Sciences,74 (2017) 88-94. (Times Cited:2; Impact Factor: 1.80).
14. S. U. Ekar, P. N. Wani, **Shoyebmohamad F. Shaikh,** U. T. Nakate, B. G. Ghule, P. V. Shinde, S. D. Raut, V. V. Jadhav, Y. B. Khollam, R. S. Mane, Selective low-temperature chlorine gas sensing properties of bio-inspired nanocrystalline TiO2, *Int. Res. J. of Science & Engineering,* Special Issue A1, 2017,81-86. (**Times Cited: 0; Impact Factor: 4.11).**
15. B. G. Ghule, S. U. Ekar, **Shoyebmohamad F. Shaikh,** U. Nakate, K. C. Gunturu, N. M. Shinde, Mu. Nuashad, C. O'Dwyer and R. S. Mane, Theoretical understanding followed computational modeling of natural carbonized sugar as a low temperature ammonia sensor material, *ACS Applied Material & Interface,* 9, 2017, 43051-43060. (**Times Cited: 7; Impact Factor: 7.50).**
16. S.T. Navale, K. K. Tehare, **Shoyebmohamad F. Shaikh**, V. B. Patil, B. N. Pawar, Mu. Naushad, F. J. Stadler, Rajaram S. Mane, Hexamethylenetetramine-mediated TiO2 films: Facile chemical synthesis strategy and their use in nitrogen dioxide detection*, Materials Letter*s, 173, 2016, 9-12. (**Times Cited: 8; Impact Factor: 2.49).**
17. **Shoyebmohamad F. Shaikh**, Rajaram S. Mane, Yun Jeong Hwang, and Oh-shim Joo, D-sorbitol-induced phase control of TiO2 nano-particles and its application for dye-sensitized solar cells, *Scientific Report,* 6:20103, 2016, 1-10. (**Times Cited: 16; Impact Factor: 5.57).**
18. **Shoyebmohamad F. Shaikh,** Hyeok-Chan Kwon, Wooseok Yang, Hyewon Hwang, Hongseuk Lee, Eunsong Lee, Sun Ihl Ma, and Jooho Moon, La2O3 Interface Modification of Mesoporous TiO2 Nanostructures Enabling Highly Efficient Perovskite Solar Cells, Journal of Material Chemistry A, 4, 2016, 15481-15485. **(Times Cited: 13; Impact Factor: 8.20).**
19. Sajjad Hussain, **Shoyebmohamad F. Shaikh**, Dhanasekaran Vikraman, Rajaram S. Mane, Oh-Shim Joo, Mu. Naushad, and Jongwan Jung, High Performance Pt-free Dye-sensitized Solar Cell using Transparent MoS2 as a Counter Electrode, *Chem.Phys.Chem* 16, 2015, 3959-3965**.** (**Times Cited: 11; Impact Factor: 3.41).**
20. Manohar K. Zate, **Shoyebmohamad F. Shaikh,** Vijaykuamr V. Patil, Kailas K. Tehare, S. S. Kolekar, Rajaram S. Mane, Mu. Naushad, B. N. Power, and Sung-Hwan Han, Synthesis and electrochemical supercapacitive performance of nickel-manganese ferrite composite films,[*Journal of Analytical and Applied Pyrolysis*](http://www.sciencedirect.com/science/journal/01652370), [116](http://www.sciencedirect.com/science/journal/01652370/116/supp/C), 2015, 177-182. (**Times Cited: 10; Impact Factor: 3.56).**
21. **Shoyebmohamad F. Shaikh**, Rajaram S. Mane, Y. J. Hwang and Oh-Shim Joo Calcium carbonate electronic-insulating layers improve the charge collection efficiency of tin oxide photoelectrodes in dye-sensitized solar cells, *Electrochimica Acta*, 167, 2015, 379-387. (**Times Cited: 4; Impact Factor: 4.08).**
22. Sajjad Hussain, **Shoyebmohamad F. Shaikh**, Dhanasekaran Vikraman, Rajaram S. Mane, Oh-Shim Joo, Mu. Naushad, and Jongwan Jung, Sputtering and sulfurization-combined synthesis of a transparent WS2 counter electrode and its application to dye-sensitized solar cells, RSC advance 5, 2015, 103567-103572 **(Times Cited: 9; Impact Factor: 3.84).**
23. **Shoyebmohamad F. Shaikh**, Rajaram S. Mane, and Oh-Shim Joo, La2O3-encapsulated-SnO2 nanocrystallite-based photoanodes for enhanced DSSCs performance, *Dalton Trans*, 44, 2015, 3075-3081. (**Times Cited: 5; Impact Factor: 4.09).**
24. **Shoyebmohamad F. Shaikh,** Rajaram S. Mane, and Oh-Shim Joo, Mass scale sugar-mediated green synthesis and DSSCs application of tin oxide nanostructured photoanode: Effect of zinc sulphide layering on charge collection efficiency, *Electrochimica Acta,* [147](http://www.sciencedirect.com/science/journal/00134686/147/supp/C), 2014, 408-417. (**Times Cited:10; Impact Factor: 4.08).**
25. Manohar K. Zate, **Shoyebmohamad F. Shaikh**, Vijaykumar V. Jadhav, Shivaji D. Waghmare, Rajaram S. Mane, Sung-Hwan Han, and Oh-Shim Joo, Electrochemical Supercapacitive Properties of Sprayed Nickel Ferrite Nanostructured Thin Film Electrodes, Journal of Nanoengineering and Nanomanufacturing, 4, 2014, 1-5. **(Times Cited: 5; Impact Factor: 0).**
26. Sambhaji S. Bhande, Dipak V. Shinde, **Shoyebmohamad F. Shaikh**, Swapnil B. Ambade, Rohan B. Ambade,d Rajaram S. Mane, Inamuddin, Mu. Naushad, and Sung-Hwan Han, Low-Temperature Solution-processed Zn-doped SnO2 Photoanodes: Enhancements in Charge Collection Efficiency and Mobility, *RSC Adv.,* 4, 2014, 20527-20530. (**Times Cited: 7; Impact Factor: 3.70).**
27. **Shoyebmohamad F. Shaikh,** Rajaram S. Mane, and Oh-Shim Joo, Spraying distance and titanium chloride surface treatment effects on DSSC performance of electrosprayed SnO2 photoanodes, RSC Adv., 4, 2014, 35919-35927. (**Times Cited: 14; Impact Factor: 3.70).**
28. **Shoyebmohamad F. Shaikh**, Gul Rahman, Rajaram S. Mane, and Oh-Shim Joo, Bismuth oxide nanoplates-based efficient DSSCs: Influence of ZnO surface passivation layer, *Electrochimica Acta,* 111, 2013, 593-600. (**Times Cited: 21; Impact Factor: 4.08).**
29. **Shoyebmohamad F. Shaikh,** Ji Yeon Lim, Rajaram S. Mane, Manohar K. Zate, Sung-Hwan Han, Oh-Shim Joo, Template-free Electrochemical Synthesis and Electrochemical Supercapacitors Application of Polyaniline Nanobuds, J Appl. Poly. Sci. 128, 2013, 3660-3664. **(Times Cited: 9; Impact Factor: 1.64).**
30. **Shoyebmohamad F. Shaikh**, Ji Yeon Lim, Oh-Shim Joo, Electrochemical supercapacitors of electrodeposited PANI/H-RuO2 hybrid nanostructure, Current Applied Physics, 14, 2013, 758-761. **(Times Cited: 21; Impact Factor: 2.02).**
31. **Shoyebmohamad F. Shaikh**, Shankara S. Kalanur, Rajaram S. Mane, and Oh-Shim Joo, Monoclinic WO3 nanorods–rutile TiO2 nanoparticles core-shell interface for efficient DSSCs, *Dalton Trans.,* 42, 2013, 10085-10088. (**Times Cited: 16; Impact Factor: 4.09).**
32. Swapnil B. Ambade, Rohan B. Ambade, Rajaram S. Mane, Go-Woon Lee, **Shoyebmohamad F. Shaikh**, Supriya A. Patil, Oh-Shim Joo, Sung-Hwan Han, and Soo-Hyoung Lee, Low temperature chemically synthesized rutile TiO2 photoanodes with high electron lifetime for organic dye-sensitized solar cells, *Chem. Commun.,* 49, 2013, 2921-2923. (**Times Cited: 25; Impact Factor: 6.71).**
33. **Shoyebmohamad F. Shaikh**, Ji Yeon Lim, Rajaram S. Mane, Sung-Hwan Han, Swapnil B. Ambade, Oh-Shim Joo, Wet-chemical polyaniline nanorice mass-production for electrochemical supercapacitors, *Synthetic Metals,* 162, 2012, 1303-1307. (**Times Cited: 14; Impact Factor: 2.20).**

**Submitted articles**

1. Pritamkumar V. Shinde, Balaji G. Ghule, Nanasaheb Shinde, Qi Xun Xia, **Shoyebmohamad F. Shaikh,** Mu. Naushad, Kwang Ho Kim and R. S. Mane, Unveiling Multi-beaker Mediated Room-temperature Chemical Synthesis of Bismuth Oxide Nanostructures for Acetone Gas Sensor and Electrochemical Asymmetric Supercapacitor Applications, Electrochemica Acta, (Under Review).
2. **Shoyebmohamad F. Shaikh**, Balaji G. Ghule, Pritamkumar V. Shinde, Nanasaheb M. Shinde, Siddheshwar D. Raut, Shyam K. Gore, and Rajaram S. Mane, Continuous Hydrothermal Flow-inspired Synthesis and Ultra-fast Ammonia and Humidity Room-temperature Sensor Activities of WO3 Nanopillars, New journal of chemistry (Submitted)

**Patent**

**Shoyebmohamad F. Shaikh**, Balaji G. Ghule, and Rajaram S. mane, An adsorption and reaction chemical method for forming low-temperature anatase TiO2 nanostructures, Indian Patent, Application No. 201821039724, CBR No. 23365.

**Book Chapter**

**Shoyebmohamad F. Shaikh**, and Rajaram S. mane, Nanostructures in Dye- Sensitized and Perovskite Solar Cells, Intechopen (Under Review)

**CONFERENCE PROCEEDINGS**

**Oral Presentation**

* **Shoyebmohamad F. Shaikh** and Oh shim Joo. (2014), Spraying distance and TiCl4 surface treatment effect on DSSCs performance of electrospray SnO2 photoanodes in 5th UST conference, 25-26 September 2014, Daejeon, South Korea.

**Poster Presentation**

* **Shoyebmohamad F. Shaikh,** R. S. Mane and Oh shim Joo. (2014), Effect of titanium chloride surface treatment and spraying distance on charge collection efficiency in electrosprayed SnO2 DSSCs photoanodes, in International Conference on Electronic Materials and Nanotechnology for Green Environment. P.81*,* 24-26 November 2014, Jeju, South Korea.
* **Shoyebmohamad F. Shaikh,** R. S. Mane (2018), ZnS ultrathin interfacial modification of meso-Tio2 based solar cells, in National conference on “Recent trends in nanoscience & Nanotechnology for clean and sustainable development” Organized by department of chemistry & physics, Vasant Mahavidyalaya, Kaij, Dist: Beed, 3rd Feb. 2018.

**Conferences attended**

* Nano Korea 2014 Symposium**,** July 2-4, 2014, Coex, Seoul, South Korea.
* National conference on “New Frontiers in Herbal and Synthetic Drug Studies” (2010).
* National seminar on “Nanomaterials for Devices: Characterization and Applications” (2010)
* National Conference on “Recent Advance in Drug Discovery Research” (2009).
* National Conference on Dielectric Relaxation and Spectroscopic Techniques (NCDRAST-2017).

**REFERENCES**

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**Dr. Mu. Naushad**

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