

Saurabh S. Soni, Ph. D.

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Professor, Department of Chemistry
&

Director, Department of Applied and Interdisciplinary Sciences, Sardar Patel University,
Vallabh Vidyanagar – 388 120, Gujarat, INDIA

Phone : +91-9898945456

Curriculum Vitae

Personnel Information :

D. O. B. : **22nd January 1977**

Gender : **Male**

Nationality : **Indian**

Current areas of Research :

- Aqueous polymer gel based electrolyte for rechargeable metal ion batteries and supercapacitors.
- Fabrication/Development of highly efficient and low cost Dye Sensitized Solar Cell (DSSC) using mesoporous titanium dioxide templated by block copolymers.
- Synthesis of Bronsted Ionic Liquids and their activity in various organic reactions.
- Self-assembly and association behavior of amphiphilic block copolymers and their interactions with various additives like ionic liquids, non-electrolytes etc.

Educational Qualifications :

Post Doctoral Fellowship
(2005 – 2006)

Laboratoire des Physique E'tate Condense,
Universite du Maine, Le Mans, France

Doctor of Philosophy in Chemistry
(1999 – 2003)

P. G. Department of Chemistry, Sardar Patel
University, Vallabh Vidyanagar

Master of Science (Physical Chemistry)
(1997 – 1999)
First class with distinction (72.3%)

P. G. Department of Chemistry, Sardar Patel
University, Vallabh Vidyanagar

Bachelor of Science
(1994 – 1997)
First class (68%)

V. P. & R. P. T. P. Science College, Vallabh
Vidyanagar

Title of Post Doctoral Research : “*Synthesis, Characterization and Photocatalytical Activities of TiO₂ mesoporous thin films templated by Block Copolymers*”

Title of Ph. D. Thesis : “*Surface Activity and Phase Behavior of Amphiphilic Copolymers in Aqueous Solutions*”

Awards and Honors :

- Received “GSA-Dr. A. K. Shah Best Paper award – 2018, 2020, 2021” from Gujarat Science Academy.
- Recipient of “Sardar Patel Research Award – 2018” (Cash Prize of Rs. 10,000/-).

- Honored with *INSA-CAS Bilateral Scientist Exchange Programme – 2018* for visiting CHINA for the period of 4 weeks
- Received “**IAAM Scientist Medal – 2017**” for out standing work in the area of nanoscience and technology from International Association of Advanced Materials, Sweden.
- Received “**Young Scientist Award**”, DST, New Delhi
- Awarded three years (2015-2018) membership of “**American Chemical Society**”
- **Most cited article** (J Mol. Catal. A, 2012) during the year 2011 – 2012 (Elsevier Publication)
- **Best Research Paper** (Langmuir 2010) Award (Price of Rs. 11,000/-) by Community Science Centre, Rajkot, INDIA
- **1st Rank holder** at M. Sc. Physical Chemistry (1999), SPU

Membership :

- Associate Fellow of Gujarat Science Academy (GSA) from April 2019.
- Member of “**American Chemical Society, USA**” for the period of 2015-2018)
- Life member “**Neutron Scattering Society of India**”
- Life member of “**Society of Material Chemistry of India**”
- Life member of “**Indian Society for Radiation and Photochemical Sciences**”
- Member of “**Board of Studies for Chemistry, S. P. University, V. V. Nagar**”
- Member of “**University & Industry Interaction Cell (UIC)**”

Research Projects :

Sr. No.	TITLE	FUNDING AGENCY	PERIOD	GRANT/ AMOUNT MOBILIZED (Rs.)
1.	Development of High Efficiency, Low Cost Dye Sensitized Solar Cell	DST, New Delhi	July 2009- August 2012	Rs. 20,43,508/-
2.	Influence of Micellar Morphology on Conductivity of Polymer Gel Electrolytes	UGC-DAE, Mumbai	1 st April 2012 – 31 st March 2015	Rs. 5,92,000/-
3.	Development of porous functionalized metal oxides and their application in metal ion removal	UGC, New Delhi	1 st July 2012 – 30 st June 2015	Rs. 10,35,000/-
4.	Development of Water Based Polymer Gel Electrolytes for Advanced Devices	SERB-DST, New Delhi	1 st April 2013 – 31 st March 2016	Rs. 25,40,800/-
5.	Scaling up of the dye sensitized solar cell fabrication	DST, New Delhi	1 st September 2014- 31 st August 2016	Rs. 87,58,816/-
6.	Colored fluorescent conducting oligomers/monomers for Dye Sensitized Solar Cells (PI : Prof. Dr. N. Sekar & Co-PI : Dr. S. S. Soni)	DST, New Delhi	1 st August 2016 – 31 st Dec. 2020	Rs. 88,78,099/-
7.	Effect of various metal salts on micelles of Amphiphilic Block Copolymers for Energy Storage Applications	UGC-DAE CSR, Mumbai	1 st April 2018 – 31 st March 2021	Rs. 6,50,000/-

Teaching Experience

- Worked as Adhoc Lecturer in Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar during the period 7th July 2003 to 7th September 2003. (*For Post Graduate Students*)
- Worked as Lecturer in Gyanyagna College of Pure Applied Sciences, Kalawad Road, Rajkot from September 2003 - July 2006. (*For Undergraduate Students*)
- Worked as Assistant Professor in Physical Chemistry at Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar, India from July 2006 – Oct. 2016. (*For Post Graduate Students*).
- Working as Professor in Chemistry at Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar since Oct. 2016. (*For Post Graduate Students*).
- Working as Director, Department of Applied and Interdisciplinary Sciences (IICISST), Sardar Patel University since May 2022.

Research Experience (Including Foreign Institutes):

- Worked as a Project Assistant in a IUC-DAEF, BARC, Mumbai sponsored research project at Department of Chemistry, Sardar Patel University for more than three years from August 1999 to March 2003.
- Worked as a “**Post Doctoral Research Fellow**” at Universite du Maine, Le Mans, France during May 2005 to July 2006.
- As a “**Visiting Scientist**” at Research School of Chemistry, Australian National University (ANU), Canberra, Australia during November 2005 – December 2005.
- Selected as “**Visiting Professor Scheme**” to visit **Universite du Maine, France** during for the period of one month (June – July 2009).
- Visited **IMMM, Universite Du Maine, Le Mans, FRANCE** as a **Visiting Professor** for the period of the one month. i.e. 22nd Sept. 2014 – 22nd Oct. 2014.
- Visited **QIBEBT, Chinese Academy of Science, CHINA under INSA-CAS Bilateral Scientist Exchange Programme – 2018** for the period of 4 weeks (i.e. from 10th May 2018 – 8th June 2018).

No. of Ph. D. Students :

Degree Awarded : **08** Currently Working : **04**

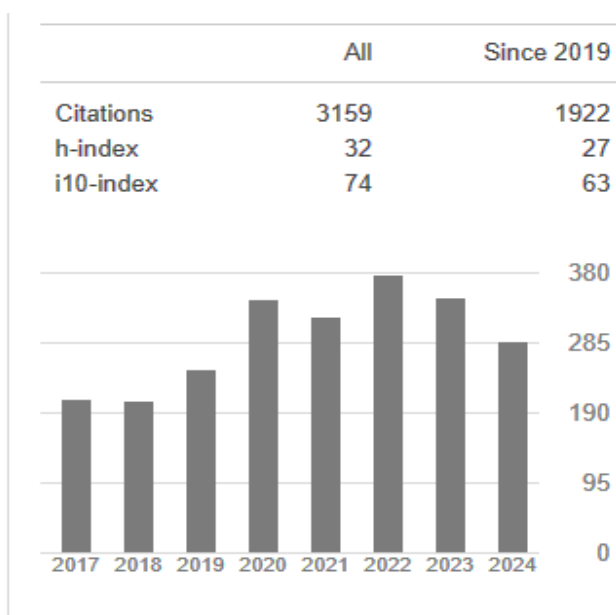
List of Patent: (No. of Patent = 03)

1. Substituted Carbazole based Dyes for Dye Solar Cells and other Optoelectronic devices.
Inventors : Kishan B. Faladu and **Saurabh SONI**
Patent file no. 2609/MUM/2013 dated 7th August 2013 (Accepted in April 2018)
2. A Crystalline Reduced Graphene Oxide for Amplified Light Transmission and Dust Repellent Coating.
Inventors : Karan Surana and **Saurabh S. Soni**
Patent Application no. 202321020087 dated 22nd March 2023
3. Solid-State Separator Free Metal-ion Energy Storage Device with Dioxane dione cathode and method thereof.
Inventors : Sanjay Bariya, **Saurabh S. Soni**, Bhavna S. Soni
Patent Application no. 202321084137 dated 9th December 2023

List of Book Chapter : (No. of book chapters = 04)

Sr.No	Title	Author's Name	Publisher	Year of Publication
01	Quasi-Solid-State Electrolytes for Lithium-Ion Batteries (Chapter 5) (ISBN:9780367701444) (eBook ISBN9781003144816) Title of Book : Ceramic and Specialty Electrolytes for Energy Storage Devices Eds.: Prasanth Raghavan, Jabeen Fatima	Hiren K. Machhi, Keval K. Sonigara, <u>Saurabh S. Soni</u>	CRC Press, Taylor & Francis Group	March 2021
02	Aqueous Electrolytes for Lithium and Sodium Ion Batteries (Chapter 9) (ISBN:9780367701444) (eBook ISBN9781003144816) Title of Book : Ceramic and Specialty Electrolytes for Energy Storage Devices Eds.: Prasanth Raghavan, Jabeen Fatima	<u>Saurabh S. Soni</u> , Jyoti Prasad	CRC Press, Taylor & Francis Group	March 2021
03.	Role of metal oxides as photoelectrodes in dye-sensitized solar cells (Chapter 9) (ISBN : 978-0-323-85705-5) Title of Book : Advances in Metal Oxides and Their Composites for Emerging Applications Ed.: Sagar D. Delekar	Jayraj V. Vaghasiya, Keval K. Sonigara, <u>Saurabh S. Soni</u>	Elsevier	June 2022
04.	Metal oxides as photoanodes for photoelectrochemical water splitting: synergy of oxygen vacancy (Chapter 3) (ISBN : 978-0-323-85705-5) Title of Book : Advances in Metal Oxides and Their Composites for Emerging Applications Ed.: Sagar D. Delekar	Keval K. Sonigara, Jayraj V. Vaghasiya, <u>Saurabh S. Soni</u>	Elsevier	June 2022

List of Publications (No. of publications = 105)



a) In Journals

1. Micellar Structure of Silicone Surfactants in Water from Surface Activity, SANS and Viscosity Studies.
Saurabh. S. Soni, N. V. Sastry, V. K. Aswal and P. S. Goyal
J. Phys. Chem. B **2002**, *106*, 2606 – 2617. (Impact Factor : 2.857)
<https://doi.org/10.1021/jp0129434>
2. Surface Activity, SANS and Viscosity Studies in Aqueous Solutions of Oxyethylene and Oxybutylene Di- and Triblock Copolymers.
Saurabh S. Soni, N. V. Sastry, A. K. Patra, J. V. Joshi and P. S. Goyal
J. Phys. Chem. B **2002**, *106*, 13069 – 13077. (Impact Factor : 2.857)
<https://doi.org/10.1021/jp026277y>
3. Dynamic Light Scattering and Viscosity Studies on the Association Behavior of Silicone Surfactants in Aqueous Solutions.
Saurabh. S. Soni, N. V. Sastry, John George and H. B. Bohidar
J. Phys. Chem. B **2003**, *107*, 5382 – 5390. (Impact Factor : 2.857)
<https://doi.org/10.1021/jp027444x>
4. Surface Active and Association Behavior of Oxybutylene – Oxyethylene and Oxyethylene – Oxybutylene – Oxyethylene Copolymers in Aqueous Solutions.
S. S. Soni, N. V. Sastry, John George and H. B. Bohidar
Langmuir **2003**, *19*, 4597 – 4603. (Impact Factor : 3.557)
<https://doi.org/10.1021/la027072j>
5. Study on the Effect on Nonelectrolyte Additives on the Phase, Thermodynamics, and Structural Changes in Micelles of Silicone Surfactants in Aqueous Solutions from Surface Activity, Small Angle Neutron Scattering and Viscosity Measurements.
Saurabh S. Soni, N. V. Sastry, J. V. Joshi, Ekta Seth and P. S. Goyal
Langmuir **2003**, *19*, 6668 – 6677. (Impact Factor : 3.557)
<https://doi.org/10.1021/la034389q>
6. Quantitative SAXS Analysis of the P123/Water/Ethanol Ternary Phase Diagrams.
S. S. Soni, G. Brotons, M. Bellour, T. Narayanan and A. Gibaud
J. Phys. Chem. B **2006**, *110*, 15157 – 15165. (Impact Factor : 2.857)
<https://doi.org/10.1021/jp062159p>
7. Visible – Light Photocatalysis in Titania based Mesoporous Thin Films.
Saurabh. S. Soni, M. J. Henderson, J.-F. Bardeau, J. White, A. Gibaud
Advanced Materials **2008**, *20*, 1493-1498. (Impact Factor : 27.398)
<https://doi.org/10.1002/adma.200701066>
8. Synthesis, Characterization and Curing of o-Cresol – Furfural Resins.
A. U. Patel, **S. S. Soni**, H. S. Patel
Int. J. Polymeric Materials **2009**, *58*, 10, 509 – 516. (Impact Factor : 1.982)
<https://doi.org/10.1080/00914030903035436>
9. Excess molar volumes, excess isentropic compressibilities and relative permittivity deviations for the ternary mixtures of esters + glycols + organic solvents at different temperatures.
N. V. Sastry, M. C. Patel, R. R. Thakor, **S. S. Soni**

- J Mol. Liq.* **2010**, *157*, 25 – 33. (Impact Factor : **5.065**)
<https://doi.org/10.1016/j.molliq.2010.08.001>
10. Densities, Speeds of Sound, Excess Molar Volumes, and Excess Isentropic Compressibilities at T = (298.15 and 308.15) K for Methyl Methacrylate + 1-alkanols (1-Butanol, 1-Pentanol, and 1-Heptanol) + Cyclohexane, + Benzene, + Toluene, + *p*-xylene and + Ethylbenzene.
N. V. Sastry, S. R. Patel, **S. S. Soni**
J Chem. Eng. Data **2011**, *56*, 142 – 152. (Impact Factor : **2.323**)
<https://doi.org/10.1021/je100652b>
 11. Effect of non-electrolyte additives on micellization and clouding behavior of silicone surfactant in aqueous solutions.
S. S. Soni, S. H. Panjabi, N. V. Sastry
Colloid and Surf. A **2011**, *377*, 205 – 211. (Impact Factor : **3.990**)
<https://doi.org/10.1016/j.colsurfa.2010.12.048>
 12. Silica gel supported –SO₃H functionalised benzimidazolium based ionic liquid as a mild and effective catalyst for rapid synthesis of 1-amidoalkyl naphthols.
Deepali A. Kotadia, **Saurabh S. SONI**
J. Molecular Catalysis A, **2012**, *353-354*, 44 – 49. (Impact Factor : **3.687**)
<https://doi.org/10.1016/j.molcata.2011.11.003>
 13. Ionic conductivity through thermoreversible polymer gel : ordering matters
Saurabh S. SONI, Kishan B. Fadadu, Alain Gibaud
Langmuir, **2012** *28*, 751 – 756. (Impact Factor : **3.557**)
doi: 10.1021/la202670v
 14. Aggregation behavior of pyridinium based ionic liquids in water – surface tension, ¹H NMR chemical shifts, SANS and SAXS measurements.
Nandhibatla V. Sastry, Nilesh M. Vaghela, Pradip M. Macwan, **Saurabh S. SONI**, Vinod K. Aswal, Alain Gibaud
J. Colloid and Interface Science, **2012**, *371(1)*, 52-61. (Impact Factor : **7.489**)
DOI: [10.1016/j.jcis.2011.12.077](https://doi.org/10.1016/j.jcis.2011.12.077)
 15. Spectral sensitization of TiO₂ by new hemicyanine dyes in dye solar cell yielding enhanced photovoltage : Probing chain length effect on performance.
Kishan B. Fadadu, **Saurabh S. Soni**
Electrochimica Acta **2013**, *88*, 270 – 277. (Impact Factor : **6.215**)
<https://doi.org/10.1016/j.electacta.2012.10.072>
 16. Symmetrical and unsymmetrical Bronsted Acidic ionic liquids for the effective conversion of fructose to 5-hydroxymethyl furfural.
Deepali A. Kotadia, **Saurabh S. Soni**
Catalysis Science and Technology **2013**, *3*, 469-474. (Impact Factor : **5.721**)
<https://doi.org/10.1039/C2CY20493B>
 17. Visible light induced cell damage of Gram positive bacteria by N-doped TiO₂ mesoporous thin films.
S. S. Soni, G. S. Dave, M. J. Henderson, A. Gibaud
Thin Solid Films **2013**, *531*, 559 – 565. (Impact Factor : **2.030**)
<https://doi.org/10.1016/j.tsf.2012.12.056>

18. Excess molar volumes, excess isentropic compressibilities, excess viscosities for Methyl acetate + ethyl acetate, + butyl acetate +, isoamyl acetate +, methyl propionate +, ethyl propionate +, ethyl butyrate +, methyl methacrylate +, ethyl methacrylate +, and butyl methacrylate + cyclohexane at T = 298.15 and 303.15 K.
Nandhibatla V. Sastry, Sunil R. Patel, **Saurabh S. Soni**
J. Mol. Liquid **2013**, *183*, 102-112. (Impact Factor : **5.065**)
<https://doi.org/10.1016/j.molliq.2013.04.015>
19. Ionic liquid induced sphere – to – ribbon transition in the block copolymer mediated synthesis of silver nanoparticles.
Saurabh S. Soni, Rohit L. Vekariya, Vinod K. Aswal
RSC Advances **2013**, *3*, 8398-8406. (Impact Factor : **3.119**)
<https://doi.org/10.1039/C3RA41138A>
20. Sulfonic acid functionalized solid acid: an alternative eco-friendly approach for transesterification of non-edible oils with high free fatty acids.
Deepali A Kotadia, **Saurabh S SONI**
Monatsh Chem. **2013** *144*, 1735-1741. (Impact Factor : **1.349**)
DOI: [10.1007/s00706-013-1041-4](https://doi.org/10.1007/s00706-013-1041-4)
21. Time-dependent stereoselective Heck reaction using mesoporous Pd/TiO₂ nanoparticles catalyst under sunlight.
Saurabh S SONI, Deepali A. Kotadia
Catalysis Science and Technology **2014**, *4*, 510-515. (Impact Factor : **5.721**)
<https://doi.org/10.1039/C3CY00602F>
22. Effect of self-assembly on triiodide diffusion in water based polymer gel electrolytes : An application in dye solar cell
S. S. Soni, K. B. Fadadu, R. L. Vekariya, J. Debgupta, K. D. Patel, A. Gibaud, V. K. Aswal
J. Colloid and Interface Science **2014**, *425*, 110-117. (Impact Factor : **7.489**)
<https://doi.org/10.1016/j.jcis.2014.03.047>
23. Nonelectrolyte-Induced micellar shape changes in aqueous solutions of silicone surfactants.
S. S. Soni, R. L. Vekariya, N. V. Sastry, H. P. Soni, S. R. Patil, S. H. Panjabi
J. Dispersion Science & Technology **2014**, *35(10)*, 1419-1426. (Impact Factor : **1.701**)
<https://doi.org/10.1080/01932691.2013.848406>
24. Pd doped SiO₂ nanoparticles : an efficient recyclable catalyst for Suzuki, Heck and Sonogashira reactions.
Deepali A Kotadia, Urmila H. Patel, Sahaj Gandhi, Saurabh S. Soni
RSC Advances **2014**, *4*, 32826-32833. (Impact Factor = **3.119**)
<https://doi.org/10.1039/C4RA01813C>
25. Highly Efficient One-dimensional ZnO Nanowire-based Dye sensitized Solar Cell using a Metal free, D-π-A type, Carbazole derivative with more than 5% power conversion
Dipankar Barpuzary, Anindya S. Patra, Jayraj V. Vaghasiya, Bharat G. Solanki, **Saurabh S. Soni**, Mohammad Qureshi
ACS Applied Materials Interface Science, **2014**, *6*, 12629-12639. (Impact Factor : **8.758**)
<https://doi.org/10.1021/am5026193>

26. Effect of Ionic Liquids on Microstructures of Micellar Aggregates formed by PEO-PPO-PEO Block Copolymer in Aqueous Solution.
Rohit L. Vekariya, Debes Ray, Vinod K. Aswal, Puthusserickal A. Hassan, **Saurabh S. Soni**
Colloids and Surfaces A : Physicochem. Eng. Aspects **2014**, 462, 153-161. (Impact Factor : **3.990**)
<https://doi.org/10.1016/j.colsurfa.2014.08.030>
27. Stable mesoporous Fe/TiO₂ nanoparticles : A recoverable catalyst for solvent-free synthesis of propargylamine via C-H activation
Deepali A. Kotadia, **Saurabh S. Soni**
Applied Catalysis A : General, **2014**, 488, 231-238. (Impact Factor : **5.006**)
<https://doi.org/10.1016/j.apcata.2014.09.044>
28. A synergistic effect of microwave / ultrasound and symmetrical acidic ionic liquids on transesterification of vegetable oils with high free fatty acid.
Saurabh S. Soni, Deepali A. Kotadia, Vaibhav K. Patel, Hiren Bhatt
Biomass Conv. Bioref. **2014**, 4, 301-309. (Impact Factor : **2.602**)
[10.1007/s13399-013-0112-4](https://doi.org/10.1007/s13399-013-0112-4)
29. Influence of N-alkylpyridinium halide based ionic liquids on Micellization of P123 in aqueous solutions : A SANS, DLS and NMR study.
Rohit L. Vekariya, Vinod K. Aswal, Puthusserickal A. Hassan, **Saurabh S. Soni**
Langmuir, **2014**, 30, 14406-14415. (Impact Factor : **3.557**)
<https://doi.org/10.1021/la502902n>
30. Enhanced photovoltaic performance of mesoporous SnO₂ based solar cells utilizing 2D MgO nanosheets sensitized by a metal-free carbazole derivative.
Mohammad Qureshi, Tridip Ranjan Chetia, Mohammad Shaad Ansaria, **Saurabh S. Soni**, M. Qureshi
J. Mater. Chem. A, **2015**, 3, 4291-4300. (Impact Factor : **11.301**)
<https://doi.org/10.1039/C4TA05877A>
31. Sulphonate anchored hemicyanine dyes for dye solar cell : A study on dipole moment and polarity.
Kishan B. Fadadu, Jayraj V. Vaghasiya, Sudip Choudhury, **Saurabh S. Soni**
J. Renew. & Sustain. Energy, **2015**, 7, 023114. (Impact Factor : **1.575**)
DOI: [10.1063/1.4915519](https://doi.org/10.1063/1.4915519)
32. Microbial Selenium Nanoparticles (SeNPs) and their Application as a Sensitive Hydrogen Peroxide Biosensor.
K. S. Prasad, J. V. Vaghasiya, **S. S. Soni**, J. Patel, R. Patel, M. Kumari, F. Jsamani, K. Selvaraj,
Appl. Biochem. Biotechnol. **2015**, 177, 1386 – 1393. (Impact Factor : **2.277**)
<https://doi.org/10.1007/s12010-015-1814-9>
33. Photocatalytic activity of Fe doped ZnS nanoparticles and carrier mediated ferromagnetism.
N. Dixit, J. V. Vaghasiya, **S. S. Soni**, M. Sarkar, M. Chavda, N. Agrawal
J. Environ. Chem. Eng., **2015**, 3, 1691. (Impact Factor : **1.355**)
[10.1016/j.jece.2015.06.010](https://doi.org/10.1016/j.jece.2015.06.010)

34. Improved molecular architecture of D- π -A carbazole dyes: 9% PCE with a cobalt redox shuttle in dye sensitized solar cells.
S. S. Soni, K. B. Fadadu, J. V. Vaghasiya, B. G. Solanki, K.K. Sonigara, A.Singh, D.Das, P.K. Iyer
J. Mater. Chem. A, **2015**, *3*, 21664. (Impact Factor : **11.301**)
<https://doi.org/10.1039/C5TA06548H>
35. Evolution of rhodium (III) and iridium (III) chelates as metallonucleases.
P. A. Vekariya, P. S. Karia, J. V. Vaghasiya, S. S. Soni, E. Suresh
Polyhedron **2016**, *110*, 73 – 84. (Impact Factor : **2.343**)
DOI:10.1016/j.poly.2016.01.050
36. Hybrid AgNP-TiO₂ thin film based photoanode for dye sensitized solar cell.
Jayraj V. Vaghasiya, Keval K. Sonigara, Kishan B. Fadadu, Saurabh S. Soni
Perspectives in Science **2016**, *8*, 46-49. (Impact Factor : *N.A.*)
<https://doi.org/10.1016/j.pisc.2016.03.003>
37. ZnO/CdS bi-layer nanostructures photoanode for dye sensitized solar cells.
Paresh V. Dalal, Milind P. Deshpande, Bharat G. Solanki, Saurabh S. Soni
AIP Conference Proceedings **2016**, *1728*, 020223-1-4. (Impact Factor : *N.A.*)
[10.1063/1.4946274](https://doi.org/10.1063/1.4946274)
38. Humic Acid as a Sensitizer in Highly Stable Dye Sensitized Solar Cells : Energy from an Abundant Natural Polymer Soil Component.
Rohit L. Vekariya, Keval K. Sonigara, Kishan B. Fadadu, Jayraj V. Vaghasiya, Saurabh S. Soni
ACS Omega, **2016**, *1*, 14-18. (Impact Factor : **2.870**)
<https://doi.org/10.1021/acsomega.6b00010>
39. Ni doped ZnS nanoparticles as Photocatalyst : Can mixed phase be optimized for better performance ?
Ekta Shah, Jayraj V. Vaghasiya, Saurabh S. Soni, C. J. Panchal, Priya S. Suryavandhi, Mukesh Chavda, Hemant P. Soni
J. Environ. Chem. Eng. **2016**, *4*, 4708-4718. (Impact Factor : **4.30**)
<https://doi.org/10.1016/j.jece.2016.10.031>
40. Design, synthesis and DSSC performance of o-fluorine substituted phenylene spacer sensitizers : Effect of TiO₂ thickness variation.
T. Bhim Raju, J. V. Vaghasiya, A. Afroz, S. S. Soni, P. K. Iyer,
Phys. Chem. Chem. Phys. **2016**, *18*, 28485- 28491. (Impact Factor : **3.430**)
<https://doi.org/10.1039/C6CP05641E>
41. Influence of m-fluorine substituted phenylene spacer dyes in dye-sensitized solar cells.
T. Bhim Raju, J. V. Vaghasiya, M. A. Afroz, S. S. Soni, P. K. Iyer
Org. Electronics **2016**, *39*,371-379. (Impact Factor : **3.310**)
DOI: 10.1016/j.orgel.2016.10.024

42. Role of a phenothiazine/phenoxazine donor in solid ionic conductors for efficient solid state dye sensitized solar cells.
Jayraj V. Vaghasiya, Keval K. Sonigara, Jyoti Prasad, Thomas Beuvier, Alain Gibaud, **Saurabh S. Soni**
J. Mater. Chem. A **2017**, *5*, 5373-5382. (Impact Factor : **11.301**)
<https://doi.org/10.1039/C6TA09777D>
43. A Smart Flexible Zinc Battery with Colling Recovery Ability.
J. Zhao, K. K. Sonigara, J. Li, J. Zhang, B. Chen, J. Zhang, **S. S. Soni**, X. Zhou, G. Cui, L. Chen
Angewandte Chemie International Edition **2017**, *56*, 7871-7875. (Impact Factor : **12.959**)
<https://doi.org/10.1002/anie.201704373>
44. Twisted donor substituted simple thiophene dyes retard the dye aggregation and charge recombination in dye – sensitized solar cells.
T. B. Raju, J. V. Vaghasiya, M. A. Afroz, **S. S. Soni**, P. K. Iyer
Org. Electronics **2017**, *50*, 25-32. (Impact Factor : **3.310**)
DOI: [10.1016/j.orgel.2017.07.019](https://doi.org/10.1016/j.orgel.2017.07.019)
45. Iodine induced 1-D lamellar self assembly in organic ionic crystals for solid state dye sensitized solar cells.
Jayraj V. Vaghasiya, Keval K. Sonigara, Thomas Beuvier, Alain Gibaud, **Saurabh S. Soni**
Nanoscale **2017**, *9*, 15949 - 15957 (Impact Factor : **6.895**)
<https://doi.org/10.1039/C7NR06128E>
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