

### **Address for Communication**

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### ***Career Objective***

To achieve a challenging position in research and development that will provide future opportunities for the development of relevant science and technology, and a chance to use the skills acquired from my education and instrumental training.

### ***Educational Qualifications***

**Ph.D** (Chemistry), Title: Oil Based Nano-Composite Polymeric anti corrosive Coating Materials, King Saud University, Kingdom of Saudi Arabia.

**M.Sc.** (Chemistry): First Division, SRTM University, Maharashtra, India.

### ***Research experience***

- **Twelve years** of experience in the field of research. (**8 years in King Saud University, Riyadh, Saudi Arabia + 4 years at Mantena laboratories, Hyderabad, India**).

### ***Current Position***

- Currently working as **Assistant Professor** in King Saud University, Riyadh, Saudi Arabia (2014).

### ***Publications***

1. Development of corrosion protective polymeric coatings from a non-edible seed oil, Mat.-wiss. u.Werkstofftech. 2012, 43, No. 3, 253-261.

2. The report on selective acylation of benzylic alcohol's to benzyl acetate with catalytic system Ni/SiO<sub>2</sub>: An environmentally benevolent approach, *Oxidation Communications* 36, No 1, 261–270 (2013).
3. Optical and electrical conducting properties of Polyaniline/Tin oxide nanocomposite, *Arabian Journal of Chemistry* (2013) 6, 341–345.
4. Vegetable oil based hyperbranched polyester-styrene copolymer containing silver nanoparticles as microbial, corrosion resistant coating materials, *Journal of Chemistry* (Volume 2013 (2013), Article ID 962316, 11 pages.)
5. Optical and electrical properties Studies of Polyaniline/ZnO nanocomposite, *Journal of Nanomaterial's* ((Volume 2013 (2013), Article ID 157810, 5 pages).
6. Synthesis, spectroscopic and biological activities of aromatic Schiff-base, *Asian Journal of Chemistry* 26(21), 7377-7780 (2014).
7. The first methodology of Ni/Silica catalyzed acylation of phenol and naphthols with acetic anhydride as acylating reagent: A novel eco-freindly approach, *Arabian Journal of Chemistry* (2014) 7, 53-56.
8. Impairment of DNA in a Freshwater Gastropod (*Lymnea luteola* L.) After Exposure to Titanium Dioxide Nanoparticles, *Archives of Environmental Contamination and Toxicology*, Vol.68, 2015, 543-552.
9. Synthesis, NMR, FT-IR, X-Ray Structural Characterization, DFT Analysis and Isomerism Aspects of 5-(2,6-Dichlorobenzylidene) pyrimidine-2,4,6(1H,3H,5H)-trione, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, Vol. 147, 107-116 (2015).
10. Development of castor oil based poly(urethane-esteramide)/TiO<sub>2</sub> nanocomposites as anti-corrosive and anti-microbial coatings materials, *Journal of Nanomaterial's* (Volume 2015(2015), Article ID 745217, 10 pages).

11. Development of eco-friendly Poly(urethane-etheramide)/Fe<sub>2</sub>O<sub>3</sub> Nanocomposite as Anti-corrosive coating materials, (Journal of Polymer Engineering) (Article in Press).
12. Characterization and evaluation of improved performance of SnO<sub>2</sub> nanoparticles modified reverse osmosis membranes, (Journal of Nanomaterials, Volume 2015, Article ID 363175, 11 pages).
13. Synthesis and characterization of reverse osmosis membranes modified with BaTiO<sub>3</sub> nanoparticles to improve performance, 8th International Conference on Sustainable Water Resources Management, A Coruña, Spain; 06/2015.
14. Green Approach for the Effective Reduction of Graphene Oxide Using *Salvadora persica* L.Root (Miswak) Extract, Nanoscale Research Letters, (2015) 10:281,1-9.
15. Synthesis, Spectroscopic Investigations (X-ray, NMR and TD-DFT), Antimicrobial Activity and Molecular Docking of 2,6-Bis(hydroxy(phenyl)methyl)cyclohexanone, Molecules 2015, 20, 13240-13263.
16. Reverse osmosis membranes prepared by interfacial polymerization in n-heptane containing different co-solvents, Desalination and Water Treatment Journal, (57:36, (2015) 16733-16744) (doi: 10.1080/19443994.2015.1083888).
17. Characterization and evaluation of reverse osmosis membranes modified with Ag<sub>2</sub>O nanoparticles to improve performance, Nanoscale Research Letters, (2015) 10:379, 1-13, doi 10.1186/s11671-015-1080-3.
18. Evaluation of biological activities of chemically synthesized silver nanoparticles, Journal of Nanomaterials, Volume 2015, Article ID 789178, 1-7 pages, <http://dx.doi.org/10.1155/2015/789178>.

19. Plant Extract Based Eco-Friendly Synthesis Of Pd@Graphene Nanocatalysts for The Selective Oxidation Of Alcohols, *Arabian Journal of Chemistry*, Volume 9, Issue 6, November 2016, Pages 835–845.
20. Modified Polyacrylic Acid-Zinc Composites: Synthesis, Characterization and Biological Activity, *Molecules* 2016, 21, 292, 1-15. doi: 10.3390/molecules21030292.
21. Miswak Mediated Green Synthesized Palladium Nanoparticles as Effective Catalysts for the Suzuki Coupling Reactions in Aqueous Media, (*Journal of Saudi Chemical Society*, Article in Press) ( doi:10.1016/j.jscs.2016.03.008).
22. New RO TFC Membranes by Interfacial Polymerization in n-Dodecane with Various co-Solvents, (*Membranes* 2016, 6(2), 24) (doi:10.3390/membranes6020024).
23. Crystal structure of diethyl ammonium 1,3-dimethyl-2,4,6-trioxohexahydropyrimidin-5-ide,  $C_{10}H_{19}N_3O_3$ , *Zeitschrift für Kristallographie - New Crystal Structures* (Article in Press).
24. Synthesis, Characterization, Antimicrobial Activity and Molecular Docking Studies of Combined Pyrazol-Barbituric Acid Pharmacophores, *Tropical Journal of Pharmaceutical Research*, October 2016; 15 (10): 1319-1326.
25. “Miswak” Based Green Synthesis of Silver Nanoparticles: Evaluation and Comparison of their Antimicrobial Activities with the Chemical Synthesis, *Molecules* 2016, 21, 1478; 1-16, doi:10.3390/molecules21111478.
26. Plant Extract Mediated Eco-friendly Synthesis of Pd@Graphene Nanocatalyst: An Efficient and Reusable Catalyst for the Suzuki-Miyaura Coupling, *Catalysts* 2017.

27. Green synthesis and characterization of palladium nanoparticles using *Origanum vulgare* extract and their catalytic activity, *Molecules* 2017.
28. Benzyl Alcohol Assisted Synthesis and Characterization of Highly Reduced Graphene Oxide@ZrO<sub>2</sub> Nanocomposites (Under review).
29. Synthesis of Nanocomposite Membrane with Multi walled Carbon Nanotubes by Interfacial Polymerization (Communicated).
30. Molecular structure, spectroscopic and DFT computational studies on 7,11-di(furan-2-yl)-2,4-dimethyl-2,4-diazaspiro[5.5]undecane-1,3,5,9-tetraone (Under review).

### ***Instruments used***

- 400 MHz NMR (Geol), FT-IR instrument, GCMS, HPLC, Microwave synthesizes (CEM) etc.
- Differential Scanning Calorimetry(DSC), Thermal gravimetric analysis(TGA)
- Gel permeation chromatography (GPC)
- Scanning electron microscopy (SEM)
- Parr Hydrogenation Apparatus (Parr Shaker, Parr Autoclave).
- Karl Fischer analysis for moisture content in the compound.
- Melting point detector.
- SS-316 Autoclave [Parr Instrument company, Illinois, USA] of varied capacities
- Gas Chromatogram, GC [HP 6890 with Auto sampler]. The capillary column used was HP 19091j-413 with FID
- Rota vapors for concentration of solution mixture (Buchi instrument Co.)

### ***Technical Skills***

- Literature survey of raw materials, intermediates and new molecules.
- Manuscript preparation and report writing.
- Interpretation of FT-IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and Mass spectra.
- Patent searching and patent classification for literature support.

- Multi step synthesis, purification and characterization of organic molecule entity by modern chromatographic and spectroscopic techniques.
- Practical experience of scaling up of products from milligram to 500g levels.
- To prepare project plans and ensure all activities are carried out to meet project timelines.

### ***Strengths***

- Strong communication, interpersonal, learning and organizing skills matched with the ability to manage stress, time and people effectively.
- Analyzing impurity profiles for the selected synthetic route, characterization and synthesis of the impurities.
- Collection and analysis of data, clarification of analytical discrepancies of data obtained by HPLC, GC, IR, Mass, NMR and X-Ray crystallography.
- Analytical techniques TLC, HPLC, LC/MS, NMR, UV/VIS.

### ***Area of Interest***

Oil based Polymers, Stereo-selective Synthetic Organic Chemistry, Organo-metallic Chemistry,

### ***Computer skills***

Chemistry related software used: Chemdraw, Scifinder, ISIS draw, Chemexper, etc.

### ***Conferences***

1. Attended Conference on The International Conference for Nanotechnology Industries the Leading Technology of 21<sup>st</sup>. Century organized by (KAIN) KSU (13-15 Mar 2009).
2. Attended Conference on Water Desalination Conference in Arab Countries organized by arwadex 2010 at Riyadh Intercontinental Hotel, Riyadh (11-14 April 2010).
3. Attended workshop on Chemical Safety organized by chemical pollution control committee (CPPC) & Chemical Security Engagement Program (CSP) at Riyadh Intercontinental Hotel, Riyadh. Saudi Arabia (18-19 May 2010).

4. Attended Conference on Water Desalination Conference in Arab Countries organized by arwadex 2011 at Riyadh Intercontinental Hotel, Riyadh.(17-20 April 2011).
5. Attended Conference on Water Desalination Conference in Arab Countries organized by arwadex 2012 at Riyadh Intercontinental Hotel, Riyadh.(8-11, April 2012).
6. Attended Conference on The Saudi International Environmental Technology Conference 2012 organized by KACST Riyadh.(13-15 May 2012).
7. Attended Conference on the 2<sup>nd</sup> Saudi International Nano-technologies Conference (2 SINC) 2012 organized by KACST at KACST Campus, Riyadh, (11-13 Nov 2012).
8. Attended the training program on CHN elemental analysis organized by Central laboratory, College of science, King Saud University, Riyadh ( 5<sup>th</sup> April 2013).
9. Attended the training program on DSC & TGA analysis organized by Central laboratory, College of science, King Saud University, Riyadh (12<sup>th</sup> May 2013).
10. Attended Conference on The International Conference for Nanotechnology Industries the Leading Technology of 21<sup>st</sup>. Century organized by (KAIN) KSU (2016).

### ***Personal Information***

<b>Date of Birth</b>	:	1 <sup>st</sup> June 1981
<b>Father's name</b>	:	Mahaboob Subani
<b>Sex</b>	:	Male
<b>Marital Status</b>	:	Married
<b>Nationality</b>	:	Indian
<b>Languages known</b>	:	English, Telugu, Hindi, and Urdu.
<b>Hobbies</b>	:	Playing Cricket, Reading Books.
<b>Permanent Address</b>	:	S/o. Mahaboob Subani, C/O: Kiran tailors, Opp.SBH Bank, Sattena palli-522403 Guntur (district), Andhra Pradesh (State), India.