Sai Siva Kumar Pinnepalli

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EDUCATION

2022 **Interdisciplinary PhD**, Chemistry
Department of Chemistry, University of Missouri – Kansas City
Kansas City, USA.
Thesis Title: Structure Characterization of Functional Materials: Toward Machine Learning Algorithms for Modelling Complex Disordered Solids.
Advisor: Dr. Nathan A. Oyler
Co-Advisor: Dr. Michelle M. Paquette
Thesis Committee Members: Dr. Zhonghua Peng, Dr. Xiaobo Chen and Dr. Paul Rulis

2020 **Preparing Future Faculty Certification**
School of Graduate Studies
University of Missouri – Kansas City, Kansas City, USA.
Mentor: Dr. Nathan A. Oyler

2016 **Master of Science**, Chemistry
Department of Chemistry, Sri Sathya Sai Institute of Higher Learning, India.
Thesis Title: High Performance Functional Biomaterials
Advisor: Dr. Janardhana Chelli

2014 **Bachelor of Science**, Chemistry
Department of Chemistry, Sri Sathya Sai Institute of Higher Learning, India.

AWARDS AND SCHOLARSHIPS

2019 **International Student Ambassador Fellowship**
University of Missouri – Kansas City, Kansas City, USA.

2018 **Graduate Research Assistantship**
Department of Chemistry, University of Missouri – Kansas City
Kansas City, USA.

2017 **International Graduate Teaching Certification**
School of Graduate Studies, University of Missouri – Kansas City
Kansas City, USA.

2016 **Research Assistantship**, Nuclear Magnetic Resonance Research Center
Indian Institute of Science, India.

2015 **Summer Research Fellowship**, India Academy of Sciences
Jawaharlal Nehru Center for Advanced Scientific Research, India.

PUBLICATIONS

1. Naga Sai Visweswar K; Swayamsiddha K; **Sai Siva Kumar P**; Janardhana Chelli, Mukesh Doble. Microbial cyclic β-(1 → 3), (1 → 6)-glucans as potential drug carriers: Interaction studies between cyclic β glucans isolated from Bradyrhizobium japonicum and Betulinic acid. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 2018, 203 494-500. https://doi.org/10.1016/j.saa.2018.05.106

2. Poshetti Dhanishta; Sai Siva Kumar P; Sandeep Kumar Mishra; Suryaprakash Nagarajarao. Intramolecular hydrogen bond directed stable conformations of benzoyl phenyl oxalamides: Unambiguous evidence by extensive NMR studies and DFT based computations. *RSC Adv.*, 2018, 8, 11230–11240. https://doi.org/10.1039/C8RA00357B

3. Tejkiran P J, Brahma Teja M S, Sai Siva Kumar P, Pranitha Sankar, Reji Philip, Naveen S, Lokanath N K, Nageswara Rao G. D-A-π-D synthetic approach for thienyl chalcones - NLO- a structure activity study. *Journal of Photochemistry and Photobiology A: Chemistry* 2016, 324, 33-39. https://doi.org/10.1016/j.jphotochem.2016.03.009

4. R.S.Sai Siddhardha, M.S.Brahma Teja, P.J.Tejkiran, Susana Addo Ntim, P. Sai Siva Kumar, V. Lakshminarayanan, Somnath Mitra, Sai Sathish Ramamurthy. Ultra-low casting of Pt based nano-ink for electrooxidation of glycerol and ethylene glycol fuels in alkaline medium. *Fuel*, 158, 2015, 659–663. https://doi.org/10.1016/j.fuel.2015.06.017

5. Sunil A, Brahma Teja**, Sai Siva Kumar P, and** Sundaresan C N. An azo based chemosensor for sensing Chromium (III) in micellar medium. *International Conference on Global Opportunities for Latest Developments in Chemistry and Technology* (Gold-2014).

CONFERENCE PRESENTATIONS

1. Sai Siva Kumar Pinnepalli, Christopher Burkett, Jinwoo Hwang, Nathan Oyler, Michelle M. Paquette. Structure Characterization of PECVD a-SiCN:H Thin Films: Toward Machine Learning Algorithms for Modeling of Complex Disordered Solids. *AVS 66th International Symposium & Exhibition*, October 20-25, 2019, Ohio.

PROFESSIONAL MEETINGS

2019 **Frontiers in Materials Science**, Jawaharlal Nehru Center for Advanced Scientific Research. December 2-6. Bangalore, India.

2019 **American Vacuum Society 66th International Symposium & Exhibition.** October 20-25. Columbus, Ohio, USA.

2016 **Integrated Chemie Conference on Frontiers in Applied Chemistry-From Molecules to Materials**, February 12-13, Dept. of Chemistry, Sri Sathya Sai Institute of Higher Learning.

2015 **International Symposium on Computational Science**, December12-15. Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, AP, India.

2014 **International Conference on Frontiers in Nano Science, Technology and Applications**, December 20- 22. Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, AP, India.

GRANTS

2019 Nuclear magnetic resonance summer school grant from International Society of Magnetic Resonance (ISMAR). **420 EUR**

RESEARCH EXPERIENCE

2018 **Department of Chemistry, University of Missouri-Kansas City, USA.**

- Synthesis of novel organic molecular precursors for PECVD.
- Thin film characterization by ellipsometry, FT-IR, XPS, MAS solid-state NMR and diffraction studies.

2017 **Hindustan Petroleum Chemical Limited (R&D) Center, India.**

Total crude oil analysis from the refineries – fractions of crude oil, acid and base number, water content, sulfur content, asphaltene content, viscosity, refractive index, calorific value, flash point.

2016 **NMR Research Center, Indian Institute of Science, India.**

- Synthesis of benzoyl phenyl oxalamide derivatives to probe the hydrogen bond in fluoro-organics.
- 1-D and 2-D (HOSEY, HSQC) VT NMR experiments to calculate hydrogen bond strengths Synthesis of novel organic molecular precursors for PECVD and isotopes enrichment.

2015 **Department of Chemistry, Jawaharlal Nehru Center for Advanced Scientific Research (JNCASR), India.**

Synthesis perylene bis-imide functional organic molecules for semiconductor and molecular self- assemblies.

2014 **Department of Chemistry, SSSIHL**

- Brady rhizobium bacterial culture and cyclic glucan extraction from the cell walls.
- Study of host-guest complexes of cyclic glucan and betulinic acid for drug delivery applications.
- Synthesis of thienyl chalcone derivatives based on Clasein-Schmidt condensation for Non-Linear Optical (NLO) and anti-bacterial study.

2013 **Department of Chemistry, SSSIHL**

- Metal ion sensing and interference studies by complex forming ligands by UV and fluorescence spectroscopic studies.
- Performance evaluation of Pd/Pt-CNT catalysts for electrochemical HER from polyols by cyclic voltammetry and electrochemical impedance spectroscopy.

TEACHING

Courses taught at the University of Missouri–Kansas City

CHEM 437WI Physical Chemistry Laboratory Course
CHEM 5530A/CHEM 431, Physical Chemistry
CHEM 211L, Chemistry Laboratory Course
CHEM 115L, Chemistry Laboratory Course

STUDENT ADVISING

Undergraduate students

2019 Christopher W. Burkett, Department of Chemistry
2018 Michael Wiles, Department of Chemistry

Project SEED students (high school summer program)

2020 Boohar Wade
2019 Dominic A. Torre
2018 Riley Keyes

PROFESSIONAL TRAINING

- Chemical Disposal and Safety Training
- Laser Safety Training
- Electrical Safety Training
- Preparing Future Faculty Program
- International Student Ambassador and Leadership Training

PROFESSIONAL MEMBERSHIPS

Member of American Vacuum Society (2019)
Member of American Chemical Society (2018 – 2019)