

Kaustubh S. Rane

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EDUCATION

- **August 2012- Present:** PhD Candidate in Petroleum Engineering, University of Wyoming.
- **May, 2012:** B. Tech – Oils, Oleochemicals and Surfactants Technology, Institute of Chemical Technology, Mumbai, India.

PROFESSIONAL EXPERIENCE

- Instructor for PETE 3100: Rock and Fluid Lab, Spring 2018, University of Wyoming.
- Graduate Teaching Assistant for PETE 3265: Drilling Fluids Fall 2017, University of Wyoming
- Graduate Teaching Assistant for PETE 3100: Rock and Fluid Lab, Fall 2016, University of Wyoming
- In-Plant training at the refinery Bharat Petroleum Co. Ltd. Refinery, Mahul, Mumbai.
 - Trained in detailed study of the Diesel Hydro Desulfurization (DHDS) plant.
 - Project on “Reduction of SO₂ emission via stack”.

PROJECTS

Current 2017-present

- “Fractionation of Coal based on polarity, elemental composition and molecular weight of constituent molecules” under Dr. Lamia Goual at University of Wyoming.
- “Synthesis of Graphene from Coal Derived Precursors for electronic applications” under Dr. Lamia Goual at University of Wyoming.
- “Synthesis of Graphene Foam for Oil Spill Remediation” under Dr. Lamia Goual at University of Wyoming.

Former 2015-2016

- “Synthesis of Biolubricants using inedible oils” under Dr. Amit Pratap at Institute of Chemical Technology, Mumbai, India
- “Synthesis of Polyesters of Polyglycerol” under Dr. Amit Pratap at Institute of Chemical Technology, Mumbai India.

SKILLS AND EXPERTISE

- Nuclear magnetic resonance (NMR)
- Fourier-transform infrared spectroscopy (FTIR)
- Raman Spectroscopy
- Scanning Electron Microscopy (SEM)
- Elemental Analysis
- Thermogravimetric Analysis (TGA)
- Coal Liquefaction
- Coal Fractionation
- Graphene Synthesis

Research Interests

- Coal Chemistry
- Chemical Vapour Deposition
- Graphene
- Oil Spill Remediation