

**Name-** Rimzhim Gupta

**Project title-** Bacterial inactivation by photo/electro-catalysis over novel semiconductor based photocatalysts

**Skills-**

**Synthesis of nanoparticles by varying methods-** Sol-gel, combustion synthesis, hydrothermal synthesis, reverse micellar method, coprecipitation, pechini method etc.

**Characterization techniques-** Physicochemical (Energy dispersive spectroscopy, X-ray diffraction, Fourier transform infrared spectroscopy, X-ray photoelectron spectroscopy ) morphological (Scanning electron microscopy), optical (Photoluminescence, UV-vis spectroscopy (liquids & solids)) and electrochemical measurements (EIS (Electrochemical impedance spectroscopy, Zeta potential and particle size analysis)

High performance liquid chromatography

CFD modelling (Ansys fluent)

Gas chromatography

Lab scale experiments

**Courses taken-** Chemical engineering thermodynamics

Chemical reaction engineering

Computational modelling for materials

Numerical methods

Analytical mathematics

Analytical instrumentation

**Tentative date of graduation-** 2018-2019

