\*Department of Chemical Engineering, IIT Kanpur\*

\*SEMINAR\*

 Speaker: Dr. Saurav Datta, Research Engineer, Argonne National

 Laboratory, USA

\*Topic: Advanced Membrane Technologies for Bioengineering and Energy

Applications\*

\*Date\*\*:\* \*Monday \*\*6^th February 2012\*

\*Place:L-4\*

\*Time:16:00 to 17:00\*

\*All are welcome\*

Tea will be served at 15:45 near L-4

\*Abstract:\*

Membrane based technologies have drawn considerable attention from

diversified research communities due to their versatility, energy and

economic benefits, enhanced process efficiency, and ease of scaling-up.

Synergy between the science of membrane materials and engineering of the

membrane devices/processes has enabled the advancement of membrane

technology. Currently, membranes are widely used as reactor, adsorber,

advance separation device, drug delivery tool, etc., in addition to

their traditional use as separation media. Membrane technologies play

critical role in identifying solutions to achieve energy security as

well as in establishing bio-based economy that will lead towards

sustainable development for betterment of human life. This presentation

will focus on experimental study of the advanced membrane technologies

in bioengineering and energy applications along with theoretical

analysis. Specifically, membrane based bio separation, bio catalysis,

conditioning of biomass hydrolysate liquor and CO\_2 capture will be

described. The research studies related to this presentation have been

conducted at Department of Chemicals and Materials Engineering,

University of Kentucky and Energy Systems Division, Argonne National

Laboratory.

\*About the Speaker\*

Saurav Datta is a Research Engineer at Energy Systems Division, Argonne

National Laboratory, USA. Prior to that, he has worked as a postdoctoral

researcher at Argonne for three years.He has obtained PhD from

Department of Chemical and Materials Engineering, University of Kentucky

under the guidance of Dr. Dibakar Bhattacharyya. Earlier, he has

obtained M. Tech. in Chemical Engineering from IIT Kanpur (Thesis

advisors: Dr. Nishith Verma and Dr. P. K. Bhattacharya). He has obtained

B. Tech. in Chemical Engineering and B. Sc. in Chemistry from University

of Calcutta. His expertise and research interests include development of

functionalized membranes and materials for energy, bioengineering and

environmental applications.