

In Focus: Dr. Naseer Ahmed

Dr. Naseer Ahmed Khan has recently resumed duty as a Lecturer, after successfully completing Ph.D. (April, 2016) degree, in the Department of Chemical Engineering, The University of Newcastle, Australia. He completed his Bachelor and Master degrees in Chemical Engineering from University of Engineering & Technology Peshawar, Pakistan in 2003, and 2008, respectively. He got his research experience in the field of catalysis under the supervision of Prof Michael Stockenhuber, Prof Eric M. Kennedy, Prof Bogdan Z. Dlugogorski, and Prof Adesoji A. Adesina, at Priority Research Centre for Energy, The University of Newcastle, Australia. He has published numerous research papers in reputable journals.

The main focus of his doctorate research was to explore the effective ways to convert the unutilized natural gas reserves into valuable chemicals. The selective oxidation of hydrocarbons, and in particular natural gas of which CH₄ is the primary constituent, is notoriously difficult to control, mainly due to propensity of the reaction to generate products of complete combustion. For the first time, nitrous oxide (N₂O) was recognized as a more selective oxidant than oxygen (O₂) to produce valuable products including synthesis gas (CO + H₂). The thesis in general provides a detail knowledge of the scope of selective oxidation of natural gas (mainly CH₄) with N₂O over cobalt catalysts.