

P-845

SYNTHESIS OF NANO-MATERIALS TO IMPROVE THE QUALITY OF PETROLEUM MATERIALS AND DEVELOP THEIR APPLICATION IN PETROLEUM INDUSTRY

Prasenjit Sen, School of Physical Sciences, Jawaharlal Nehru University, New Delhi – 110067

Abstract:

Modern nanomaterials can find considerable applications in the petroleum industry. These range from nanocoatings to protect equipment, as catalysts in the petroleum industry, in environment cleanup by way of breakdown of toxic wastes, as additives for enhanced performance simultaneous with reduced fuel consumption in internal combustion engines and as processing and purification agents, to name a few. Some of these ideas will be reviewed in this presentation. Specific application results of some metallic nanoparticles will be presented with focus on their production scale up and relevance in the field of lubricants for instruments associated with the petroleum industry.