

## **Raul F. Lobo Bio-sketch (2017)**

Raul F. Lobo is the Claire D. LeClaire professor of Chemical and Biomolecular Engineering at the University of Delaware and Director of the Center for Catalytic Science and Technology. His research interests span the development of novel porous materials for catalysis and separations, the chemistry of zeolites, catalysis for energy and the environment, and the scientific aspects of catalyst synthesis. He has published over one hundred fifty refereed reports and he is co-inventor in four US patents. He obtained his undergraduate degree in Chemical Engineering at the University of Costa Rica in 1989 and later moved to California to pursue graduate studies in Chemical Engineering at Caltech. He worked for one year at Los Alamos National Laboratory, New Mexico as a postdoctoral fellow and started his academic career at the University of Delaware in 1995.

Prof. Lobo has conducted research in the use of zeolites for nitrogen/oxygen separations, and carbon dioxide separations from flue gases. He has contributed to the fundamentals of zeolite nucleation and crystal growth and to the application of zeolites for a number of catalytic applications. In particular his group research helped understand the mechanisms of reaction and stability of zeolite catalysts used for the removal of NO<sub>x</sub> gases from combustion exhaust, developed catalytic materials for the transformation of biomass-derived furans into commodity aromatic molecules such as xylenes and benzoic acid, and discovered materials for the selective activation of methane using copper oxide clusters.