

APMS-Supported Catalyst for the Selective Oxidation of Mustard Gas

The task of degrading chemical warfare agents is currently being faced in order to eliminate stockpiles of destructive and potentially dangerous chemicals, including the vesicant/blistering agent mustard gas. The overall objective of this research is to synthesize and characterize a heterogeneous catalyst which will selectively oxidize mustard gas in the field that is able to withstand leaching from a solid support. It has been observed that acid prepared mesoporous silica (APMS) doped with various vanadium sources are capable of this desired transformation with little to no loss of vanadium. The synthesis and preliminary catalytic activity of these materials will be presented.