

ABSTRACT

Methods, catalysts, and reactor systems for producing in high yield aromatic chemicals and liquid fuels from a mixture of oxygenates comprising di- and polyoxygenates are disclosed. Also disclosed are methods, catalysts, and reactor systems for producing aromatic chemicals and liquid fuels from oxygenated hydrocarbons such as carbohydrates, sugars, sugar alcohols, sugar degradation products, and the like; and methods, catalysts, and reactor systems for producing the mixture of oxygenates from oxygenated hydrocarbons such as carbohydrates, sugars, sugar alcohols, sugar degradation products, and the like. The disclosed catalysts for preparing the mixture of oxygenates comprise a Group VIII metal and a crystalline alumina support.

[Figure 1]