

### **Abstract**

A new and efficient oxidation process of 2,3,6-trimethyl phenol to 2,3,6-trimethyl benzoquinone (TMQ) is reported forthwith using non-exchanged and H<sup>+</sup>-exchanged manganese oxide octahedral molecular sieves (K-OMS-2 and H-K-OMS-2) as benign catalysts. The oxidation reaction is efficiently carried out using TBHP as oxidant and with catalytic amounts of OMS-2 achieving [95% conversion with excellent selectivity (\*99%) to TMQ in 30 min.