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## **MILD OXIDATION OVER W-CONTAINING HYDROTALCITES—A METHOD FOR REMOVING AROMATIC SULFUR COMPOUNDS**

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### **Abstract**

Layered double hydroxide (LDH) with Mg<sup>2+</sup> and Al<sup>3+</sup> cations in the brucite-like layer and paratungstate anions in the interlayer has been prepared by anion exchange of Mg,Al-LDH precursor containing terephthalate and tungsten precursor salt. The catalyst has been characterised by powder X-ray diffraction, RAMAN and UV-DR spectroscopy. The results indicated the formation of a solid with intercalated W<sub>7</sub>O<sub>24</sub><sup>6-</sup> species in the interlayer gallery. The catalytic oxidation of thiophene derivatives using hydrogen peroxide as oxidising agent and various solvents, in the presence of paratungstate layered double hydroxide (W-LDH) as catalyst, was investigated under mild reaction conditions.

*Keywords:* intercalated layered double hydroxides, hydrotalcites, sulfoxidation, hydrogen peroxide, paratungstate anions

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