

### High Peroxidation Catalytic Activity of TS-1 Nanosheets with a Single-Unit-Cell Thickness

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Nanomorphous TS-1 exhibiting high peroxidation catalytic activity has been hydrothermally synthesized using organic surfactant containing diquatery ammonium head group. The resultant TS-1 features unilamellar nanosheet of a single-unit-cell thickness and hence the extremely high external surface area with large pore volume. Due to the high exposure of tetrahedrally incorporated titanium species on the external surface, the TS-1 nanosheet exhibited high catalytic activity on the epoxidation of bulky olefin derivatives. In this presentation, synthesis, characterization and catalytic reactions of TS-1 nanosheet will be discussed in detail.