

# Support information for Ru-based monolithic catalysts for the catalytic oxidation of chlorinated volatile organic compounds

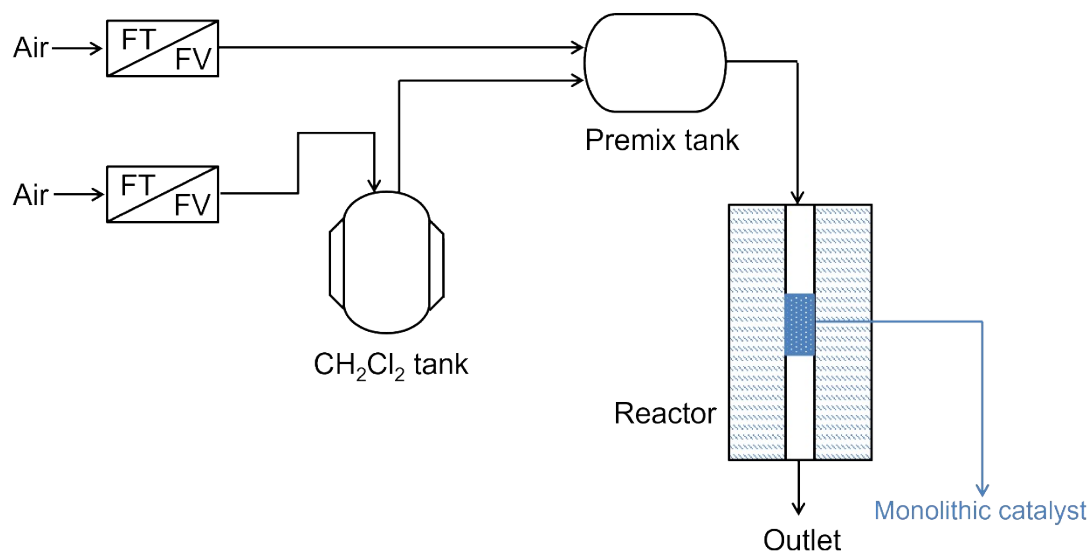
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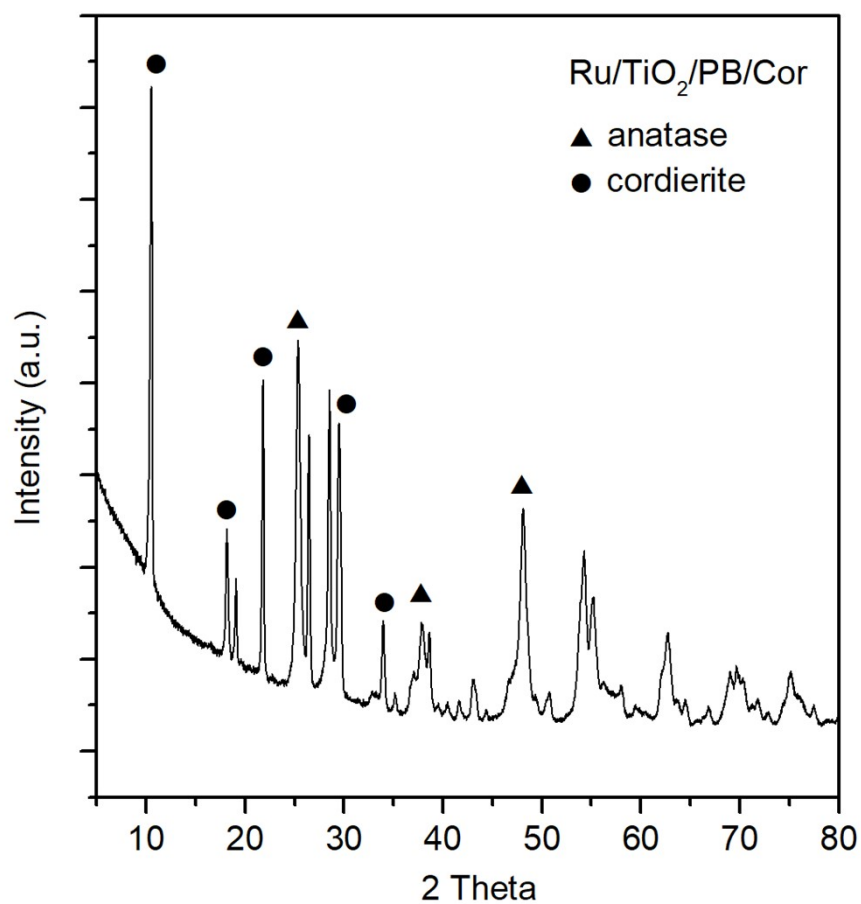
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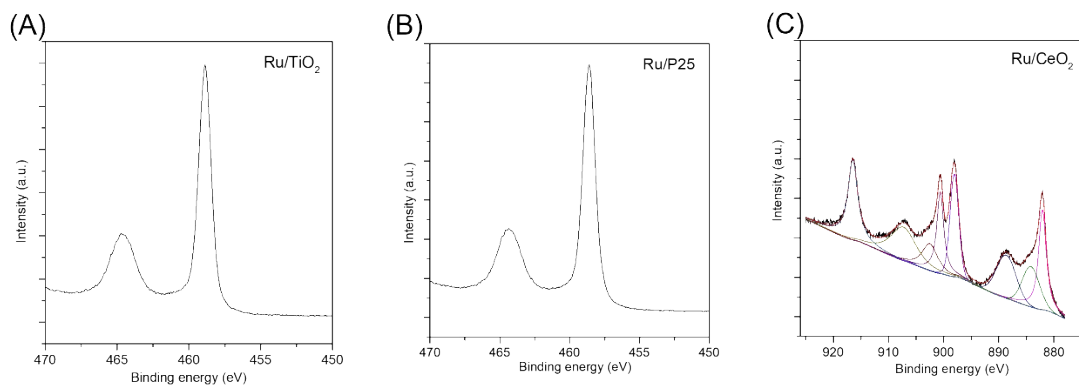
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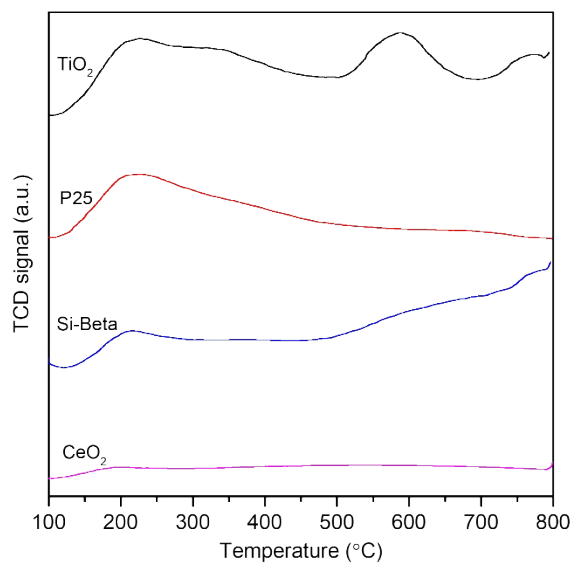
**Fig. S1.** The schematic diagram of the experimental set-up for DCM degradation



**Fig. S2.** The XRD pattern of Ru/TiO<sub>2</sub>/PB/Cor



**Fig. S3.** (A) Ti 2p XPS spectra of Ru/TiO<sub>2</sub>; (B) Ti 2p XPS spectra of Ru/P25; (C) Ce 3d XPS spectra of Ru/CeO<sub>2</sub>;



**Fig. S4.** The NH<sub>3</sub>-TPD profiles of TiO<sub>2</sub>, P25, Si-Beta and CeO<sub>2</sub>.

**Table S1.** The carbon balance over various catalysts at 460 °C

Catalysts	ratio <sup>[a]</sup>
Ru/TiO <sub>2</sub> /Cor	100.84%
Ru/P25/Cor	93.26%
Ru/Si-Beta/Cor	91.08%
Ru/CeO <sub>2</sub> /Cor	91.43%
TiO <sub>2</sub> /Cor	26.15%
Ru/TiO <sub>2</sub> /PB/Cor	93.50%
Ru/P25/PB/Cor	102.42%
Ru/Si-Beta/PB/Cor	97.37%
Ru/CeO <sub>2</sub> /PB/Cor	102.48%

$$[a]: \text{Ratio (\%)} = \frac{[CH_2Cl_2]_{out} + [CO_2]_{out} + [CO]_{out}}{[CH_2Cl_2]_{in}} \times 100\%$$