

F-TiO₂-K_xWO₃スマートウィンドウ材料の創製と評価

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Smart window coating based on F-TiO₂-K_xWO₃ nanocomposites with heat shielding, ultraviolet isolating, hydrophilic and photocatalytic performance

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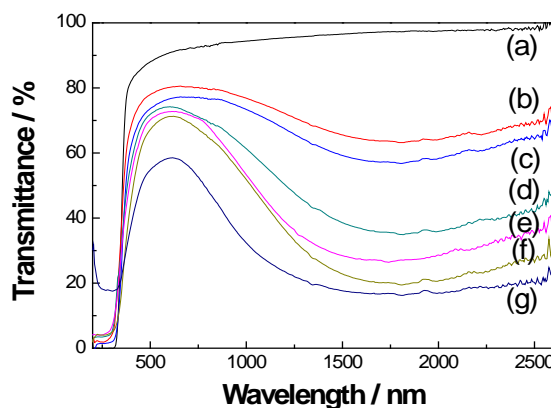


Fig.1 Transmittance spectra of (a) pure F-TiO₂, (b-g) different FT-KWO nanocomposites and (h) pure K_xWO₃ films.

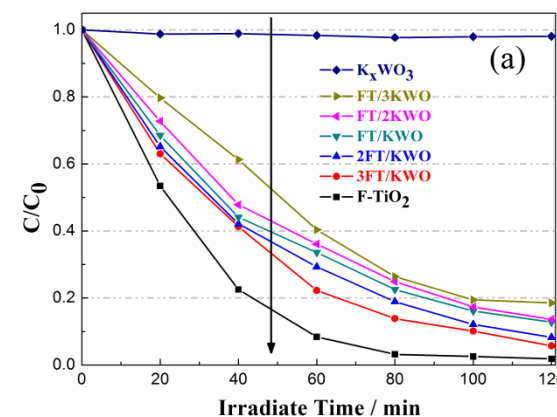


Fig.2 Variation of MO concentration against irradiation time

F-TiO₂/ K_xWO₃コンポジットの薄膜は高い赤外及び紫外遮蔽特性、優れた可視光透明性・光触媒活性・親水性を有する。合成した薄膜はITOより優れた熱遮蔽特性を示し、P25より優れた光触媒活性を示すことに成功した。The F-TiO₂/ K_xWO₃ nanocomposite film exhibited strong near-infrared, ultraviolet light shielding ability, good visible light transmittance, high photocatalytic activity and excellent hydrophilic capacity. This film exhibited better thermal insulation capacity than ITO and higher photocatalytic activity than P25.