

Titanium Dioxide Films with Pure Anatase Phase Synthesized by Mist Chemical Vapour Deposition

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Abstract

Pure anatase structured TiO₂ films were successfully synthesized by a novel fine channel mist chemical vapour deposition which is a vacuum free, low temperature method [1]. The effects of TTIP concentration on the morphological, structural and optical properties of TiO₂ films were investigated. It was confirmed that anatase crystallinity of TiO₂ film increased with the increase of TTIP concentration. Figure 1 showed that XRD patterns of TiO₂ thin films which were synthesized with the different concentration of TTIP in ethanol varying from 0.025 to 0.4 mol/L. The high catalytic activity will be expected by using obtained stable anatase TiO₂ films.

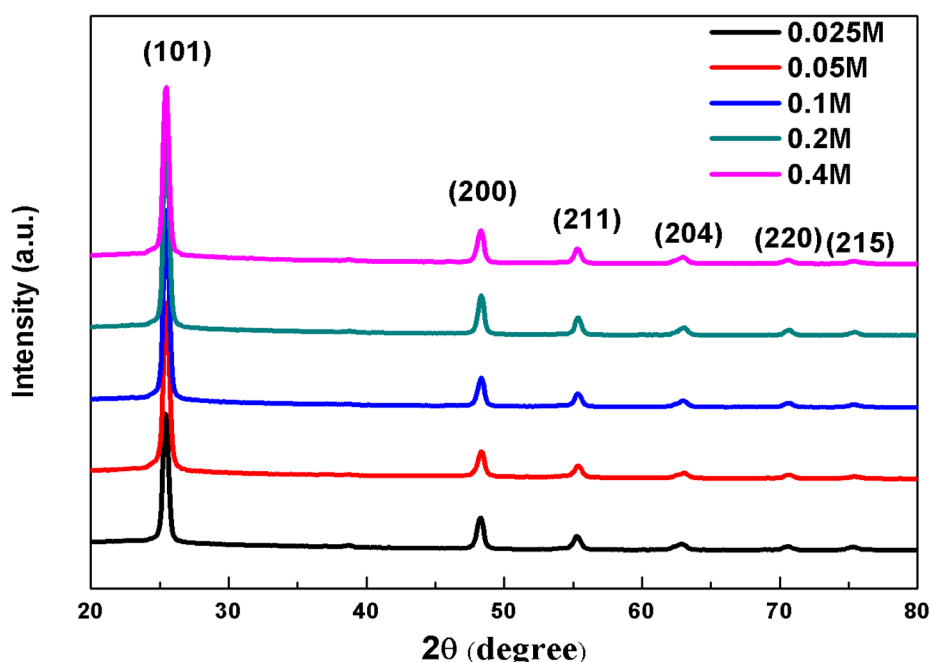


Figure 1. XRD patterns of TiO₂ films synthesized at TTIP concentration of 0.025, 0.05, 0.1, 0.2, and 0.4 mol/L.

References

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