

Performance of Thin Film SrTiO₃ Photocatalysts

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The development of photocatalyst for hydrogen production gives promising contribution for clean, sustainable and renewable energy system in the future. New approaches are introduced every year to produce more efficient photocatalysts in purpose of solving energy problem. This research is trying to contribute in producing photocatalysts system for water splitting process by introducing thin films photocatalysts system made by electrospray process. SrTiO₃:Rh is one strong candidate of photocatalyst that has been known for its ability to be actively activated under visible light irradiation. SrTiO₃:La paired with SiC is also another candidate for visible light-active photocatalyst. This Z-scheme photocatalyst system has been produced in particle form by using spray pyrolysis process, and tested for its performance for hydrogen production under visible light irradiation. In this research, thin films of SrTiO₃:Rh and SrTiO₃:La are made, and SiC is incorporated into the thin films.