

### Supplementary Information

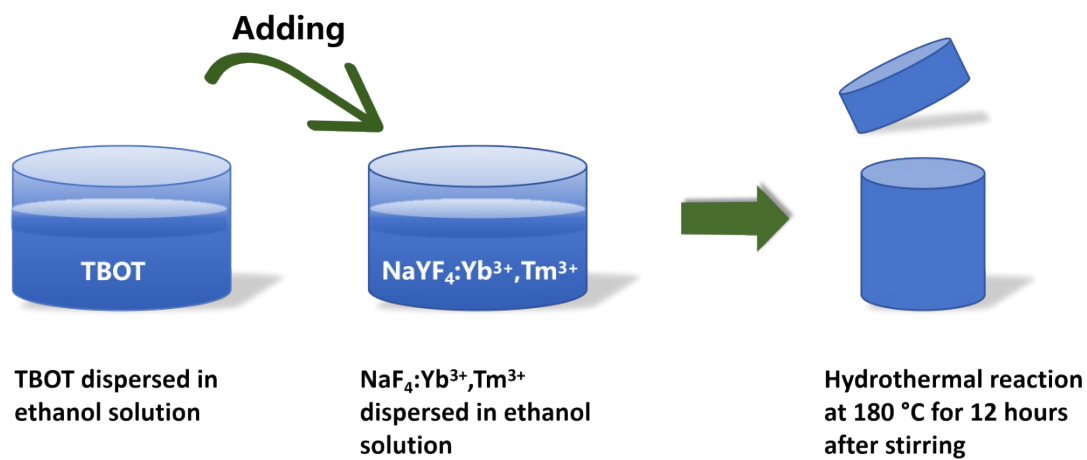


Figure Schematic synthesis route of the as-prepared NaYF<sub>4</sub>:Yb<sup>3+</sup>,Tm<sup>3+</sup>@TiO<sub>2</sub> microrod composite photocatalysts