## **Electronic Supplementary Information for**

## UV and Visible Light Photocatalytic Activity of Au/TiO<sub>2</sub> Nanoforests with Anatase/Rutile Phase Junctions and Controlled Au Locations

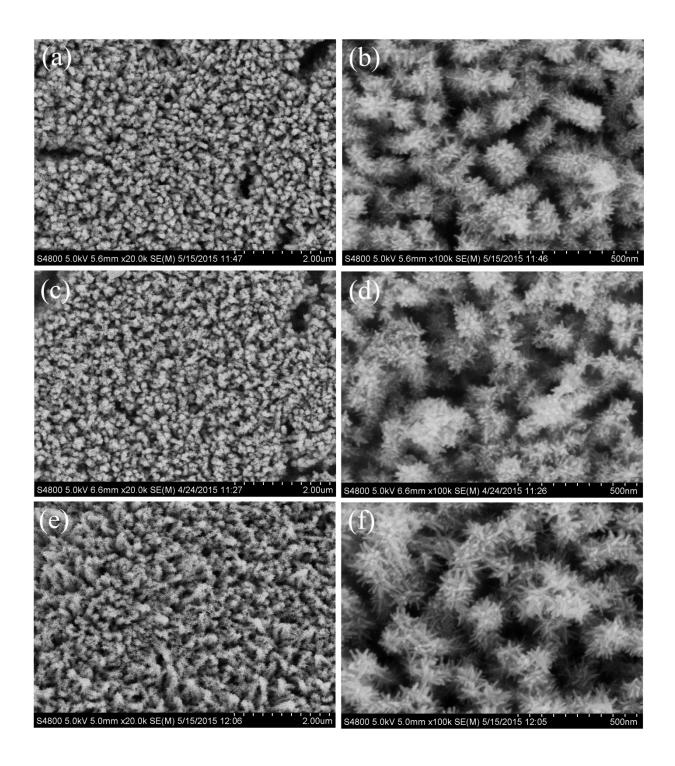
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State Key Laboratory of Silicon Materials and School of Materials Science and Engineering,

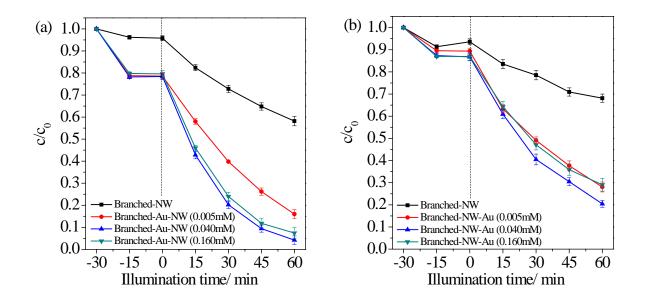
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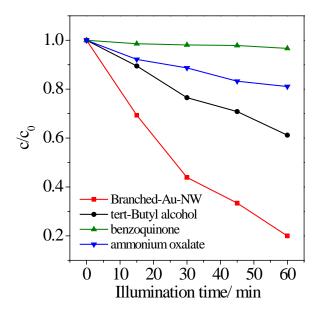
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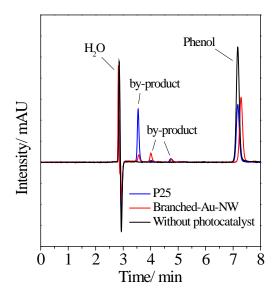
**Figure S1.** Low and high magnification top view FESEM images of the Branched-NW (a, b), Branched-NW-Au (c, d), and Branched-Au-NW (e, f).



**Figure S2.** Photodegradation curves of rhodamine B in water under UV light illumination, in the presence of (a) the Branched-NW-Au and (b) Branched-Au-NW, for which the Au-loading was achieved using HAuCl<sub>4</sub> solutions with various concentrations.



**Figure S3.** The effects of different quenching agents on the photodegradation procedures of rhodamine B in water in the presence of the Branched-Au-NW under the UV light illumination.



**Figure S4.** The LC spectra of phenol under the UV light illumination for 6 h, in absence and in the presence of the P25 film and the Branched-Au-NW.

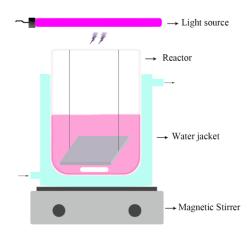


Figure S5. The schematic image showing the set-up of the photocatalytic tests.