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Title: Analysis of SHG signal from the interface of TiO₂(320) decorated by Au thin film as a function of azimuthal angle and wavelength.

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Abstract:

A gold film was fabricated on the stepped TiO_2 (320) surface with the thickness of 2 nm. SHG responses were observed from the bare TiO_2 (320) surface and the Au/stepped TiO_2 (320) interface at both 1.17 eV and 2.33 eV. After that we scanned the wavelength to find the appropriate electronic resonance information. We conducted phenomenological analysis to deduce the nonzero $\chi_{ijk}^{(2)}$ elements for both samples. Finally we separated the step and terrace contribution of $\chi_{ijk}^{(2)}$ elements from both the samples in order to explore the catalytic mechanism.