

NO_x photooxidation over different noble metals modified TiO₂

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Table S1 Photocatalysts name, precursor used and its concentration together with PCs colors

| Name | SG | Ag0.1 | Ag0.5 | Au0.1 | Au0.5 | Pt0.1 | Pt0.5 | Pd0.1 | Pd0.5nr | Pd0.5r |
|----------------------------------|---|---|---|---|--|---|---|---|---|---|
| Metal precursor /reducer | - | Ag(NO ₃) | Ag(NO ₃) | HAuCl ₄ | HAuCl ₄ | K ₂ PtCl ₄ | K ₂ PtCl ₄ | PdCl ₂ | PdCl ₂ | PdCl ₂ /NaBH ₄ |
| Precursor amount (mol. %) | 0 | 0.1 | 0.5 | 0.1 | 0.5 | 0.1 | 0.5 | 0.1 | 0.5 | 0.5 |
| Material color/ photo | white | white | white | light-purple | purple | white | orange | light-orange | orange | orange |
| |  |  |  |  |  |  |  |  |  |  |

Table S2 Basic characteristics of studied photocatalysts

| Name | SG | Ag0.1 | Ag0.5 | Au0.1 | Au0.5 | Pt0.1 | Pt0.5 | Pd0.1 | Pd0.5nr | Pd0.5r |
|--|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| BET (m² g⁻¹) | 104.5 | 115.2 | 138.0 | 134.9 | 125.2 | 131.8 | 142.8 | 116.9 | 102.0 | 101.5 |
| Pore size (cm³ g⁻¹) | 0.0578 | 0.0562 | 0.0676 | 0.0662 | 0.0617 | 0.0647 | 0.0703 | 0.0574 | 0.0503 | 0.0502 |

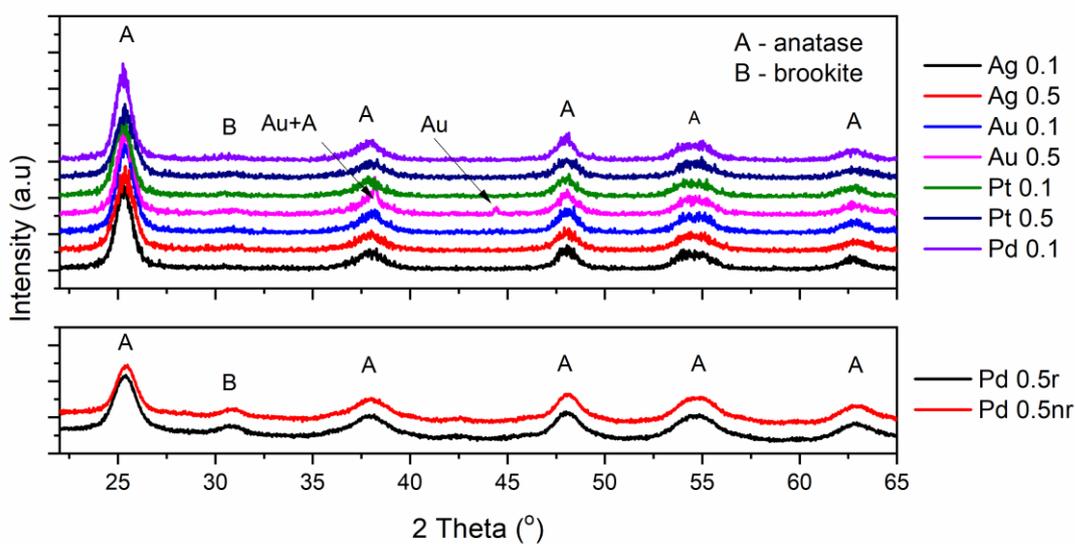


Figure S1 XRD patterns of decorated-PCs

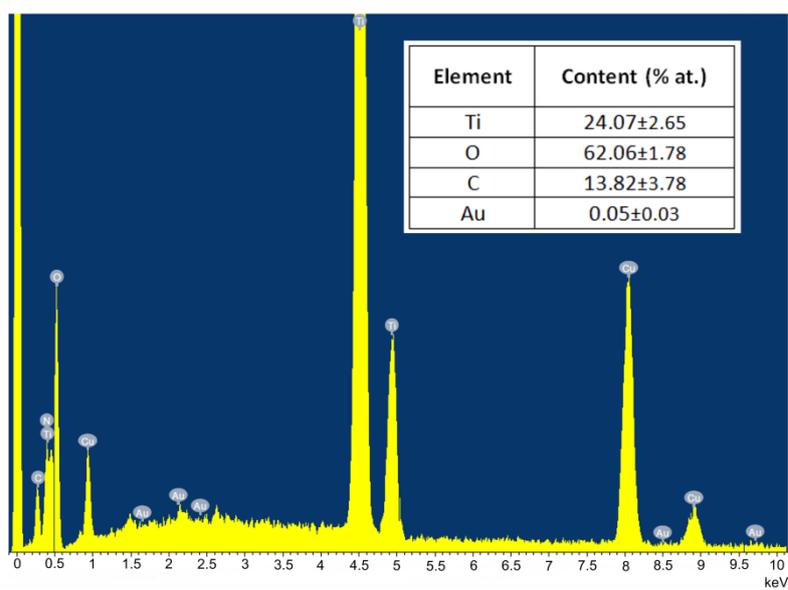


Figure S2 EDS components analysis for Au0.5 photocatalyst

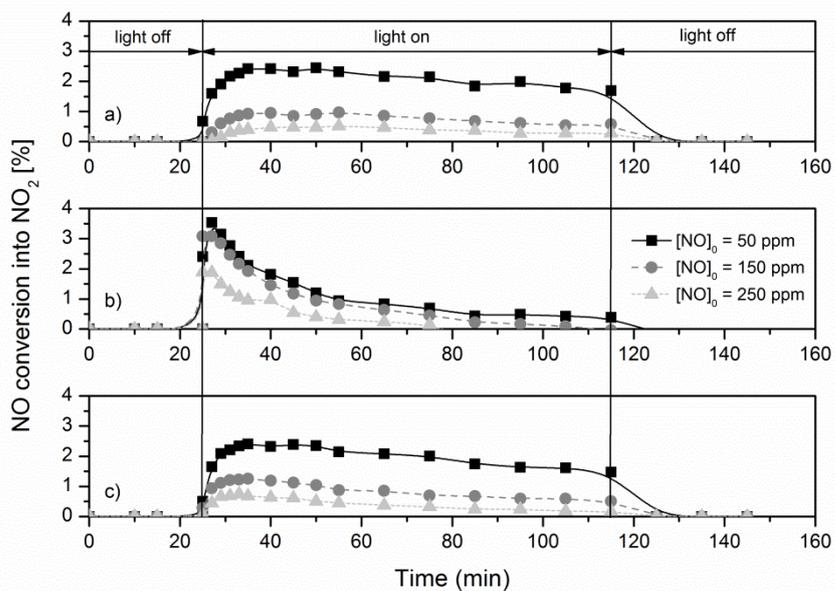


Figure S3 NO conversions into NO₂ profile a) SG, b) Ag0.1, c) Au0.1.

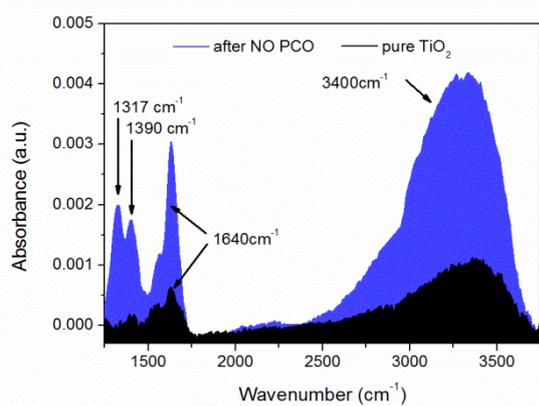


Figure S4 HATR/FTIR spectra obtained for photocatalyst film before and after photocatalytic reaction