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Electronic Supplementary Information for

Fabrication of Single Crystalline Gold Nanobelts

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In order to test the purity of the obtained gold nanobelts, XPS measurement was carried out by putting gold nanobelts suspension on well cleaned Si wafer. In Figure S1, there is no signal from the element Fe.

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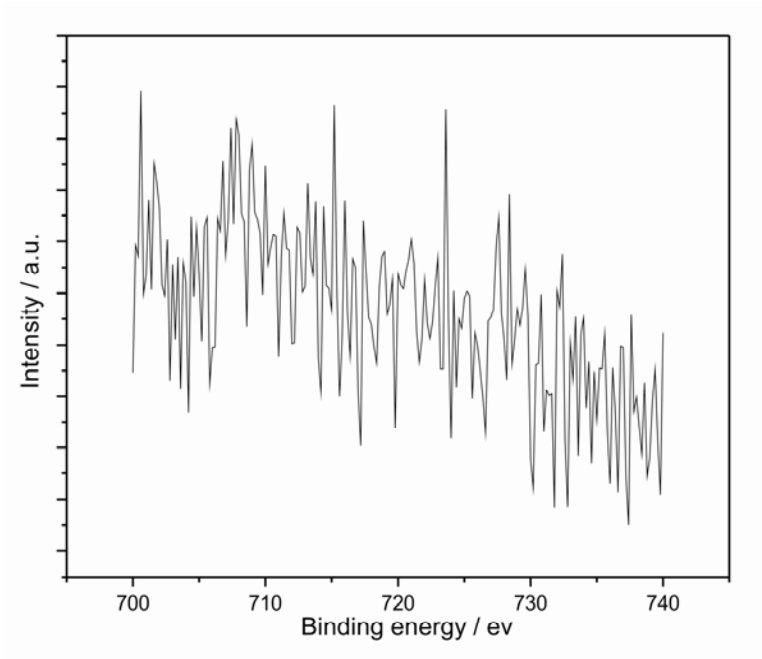

Figure S1. XPS of gold nanobelts for element Fe.

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The FE–SEM and EDX-elemental mapping also confirmed the purity of the gold nanobelts. For EDX-elemental mapping, the position for an element will be bright if the element exists. From Figures S2 b and c, one can clearly see that both the elements of Au and Si show bright compare to the SEM image (Figure S2 a), but for element Fe, the whole area is black (Figure S2 d), which proved the iron-free gold nanobelts.

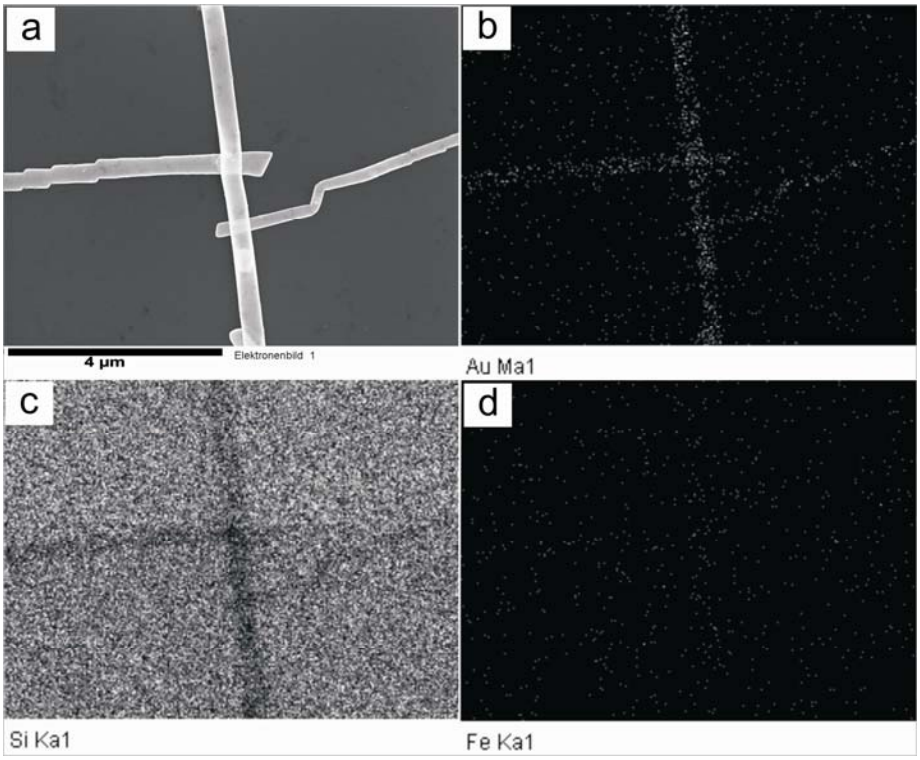

Figure S2. SEM image (a) and the corresponding EDX-elemental mapping of gold nanobelts on Si wafer for different elements (b) Au, (c) Si, and (d) Fe.

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The XRD pattern was obtained by depositing Au nanobelts suspensions onto Si wafer and let it dry in air. The XRD pattern gives further support to the quality and purity of the Au nanobelts and shows the characteristic peaks of fcc structure of gold (Joint Committee on Power Diffraction Standard (JCPDS), File No. 04-0784).

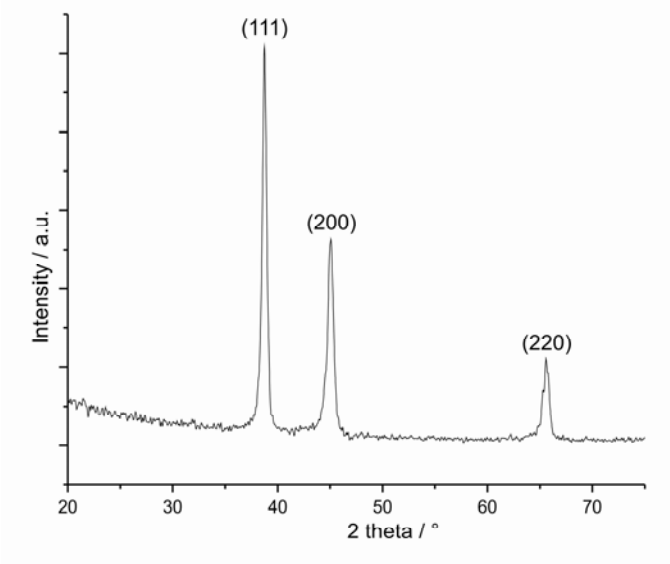

Figure S3. XRD pattern of gold nanobelts.