

## Supplementary Information

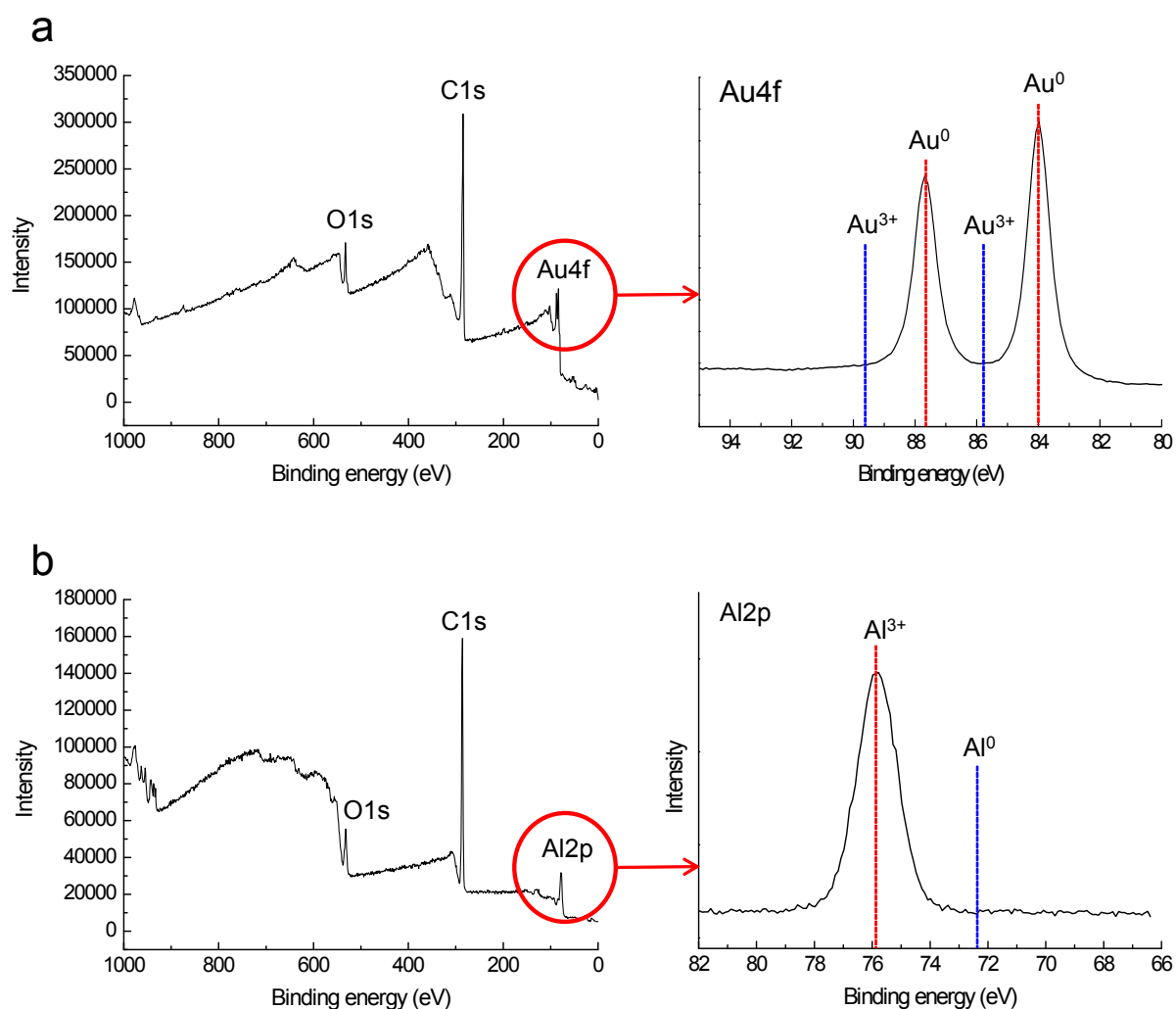
### Chemically doped three-dimensional porous graphene monoliths for high-performance flexible field emitters

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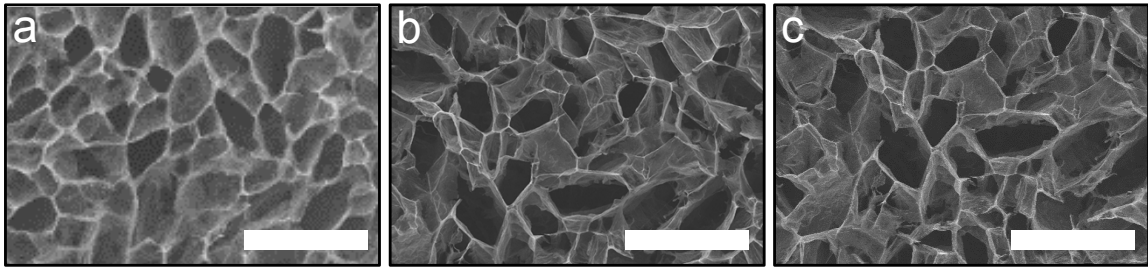
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**Fig. S1** XPS spectra of (a) the Au-doped and (b) Al-doped 3D rGO emitters, respectively. The Au<sup>3+</sup> was spontaneously reduced upon acceptance of electrons from the graphene, resulted in the Au<sup>0</sup> as a dominant Au species due to the higher reduction potential for the Au<sup>3+</sup> compared to the rGO. In contrast, the rGO easily accepted electrons from Al<sup>0</sup> due to the negative relative reduction potential from Al to rGO, resulted in the Al<sup>3+</sup> as a dominant Al species.



**Fig. S2** SEM image of (a) the undoped, (b) Au-doped, and (c) Al-doped 3D rGO emitters, respectively. The scale bars indicate 200  $\mu\text{m}$ .