**Supplementary Materials**

**Table S1: Sequential steps of activated carbon preparation and the amount of metal impregnated in different samples**

|  |  |  |  |
| --- | --- | --- | --- |
| Sequential steps | Impregnated species | Amount of metal (%) | Designation |
| Raw material | - | 0.0 | AC |
| Raw material/ thermal decomposition | - | 0.0 | ACt |
| Impregnation | CuO/Ag | 1.0/0.3 | CuO:Ag(1:0.3) |
| Impregnation/ thermal decomposition | CuO/Ag | 1.0/0.3 | CuO:Ag(1:0.3)t |
| Impregnation | CuO/Ag | 1.0/0.5 | CuO:Ag (1:0.5) |
| Impregnation/ thermal decomposition | CuO/Ag | 1.0/0.5 | CuO:Ag(1:0.5)t |

Figure S1: EDX spectra of elemental distribution present across the surface of (a) AC and (b) CuO:Ag(1:0.3)t samples

