SUPPORTING INFORMATION

Graphene Oxide Sorption Capacity Towards Elements over the Whole Periodic Table – a Comparative Study

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SI contains following tables and images:

Figure S1. The XPS spectra of HUGO after sorption of vanadium in the form of VO_2^{2+} cation.

Figure S2. High resolution XPS spectra of C 1s peak for HUGO sample after sorption of Fe^{2+} and Fe^{3+} cations.

Figure S3. The X-ray diffractogram of HUGO after sorption of Pb^{2+}. The diffraction lines correspond to $PbSO_4$.

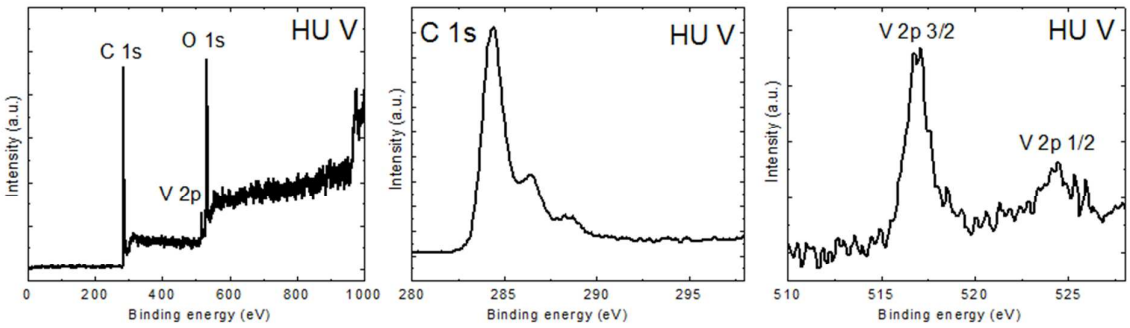
Figure S4. The EDS distribution maps of elements and corresponding SEM image of HUGO after sorption. The scale bar is 5 μm.

Figure S5. The XPS spectra of HOGO after sorption of Sn^{2+} and Sn^{4+}. The images from upstairs show the XPS survey spectra. High resolution C 1s XPS spectra and high resolution 3d Sn spectra and X-ray diffractograms. The diffraction patterns corresponding to SnO_2.

Figure S6. The X-ray diffractogram of HOGO after sorption of Pb^{2+} sample and x-ray diffraction patterns of $PbSO_4$.

Figure S7. The EDS distribution maps of elements and corresponding SEM image of HOGO after sorption. Scale bar correspond to 5 μm. The scale bar is 5 μm.

Table S1. The results of deconvolution for XPS spectra of C 1s peak.



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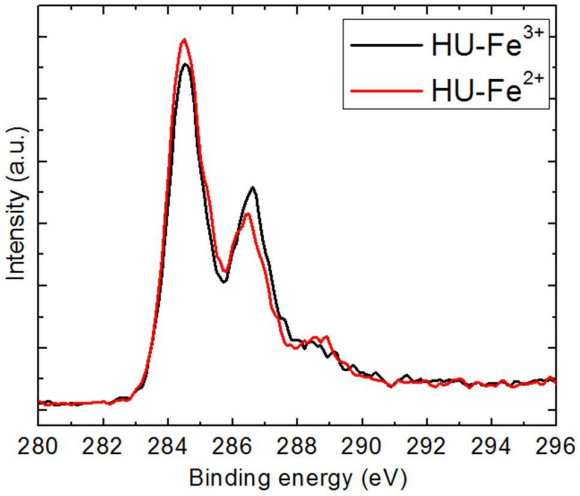

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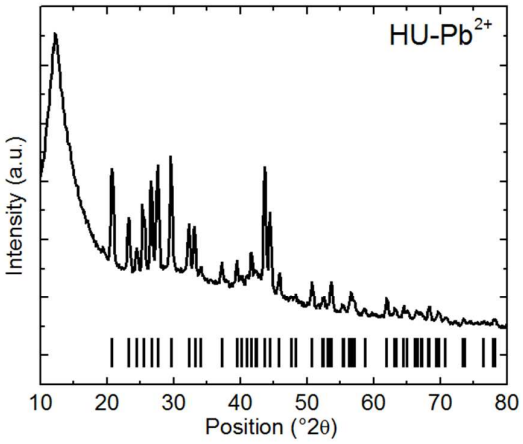

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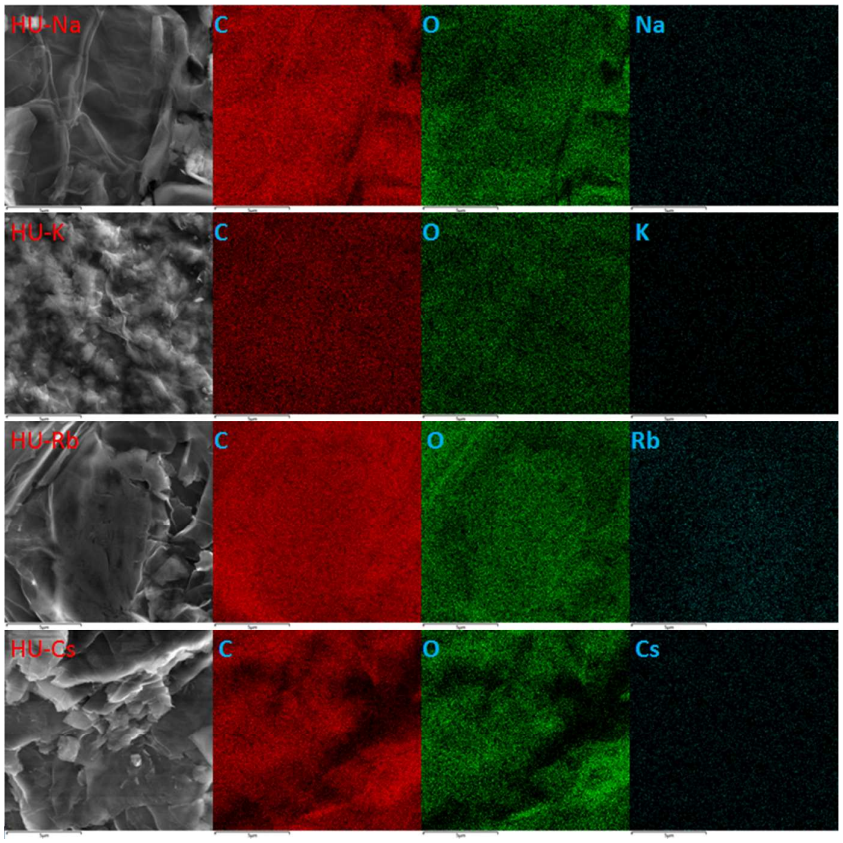
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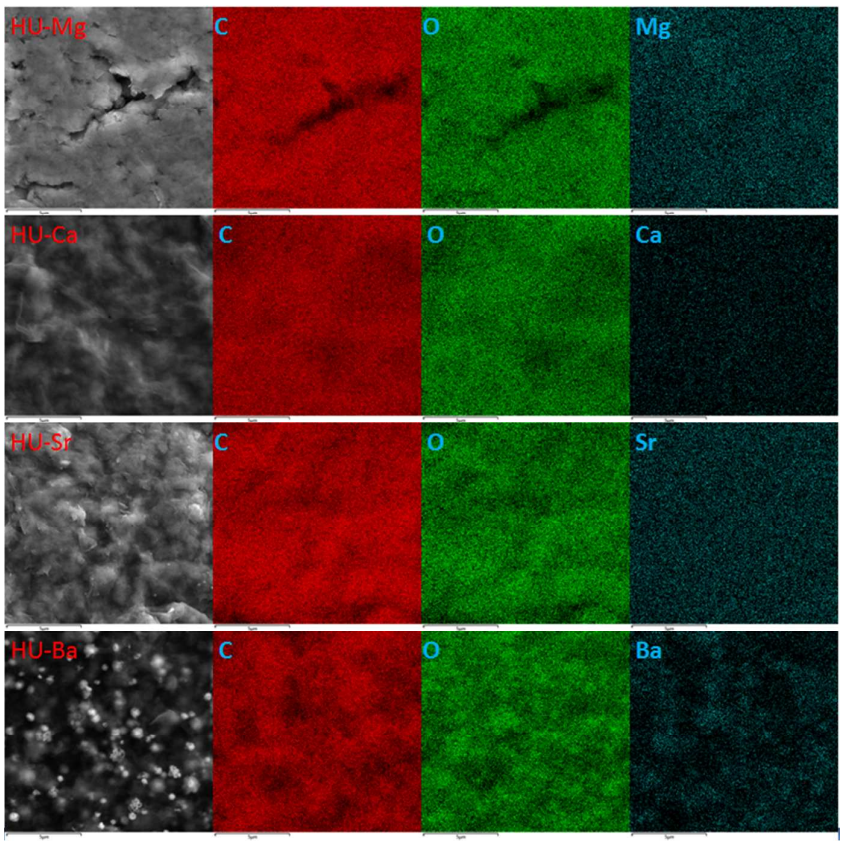
HU-K
C
O
K
HU-Rb
C
O
Rb
HU-Cs
C
O
Cs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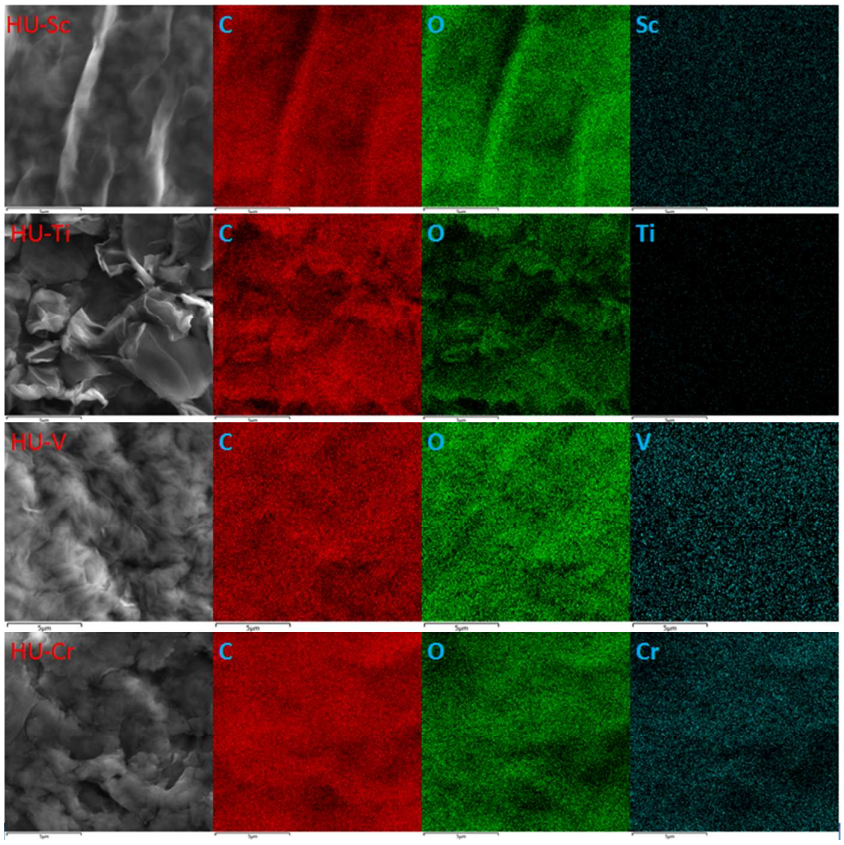
Mg
HU-Ca
C
O
Ca
HU-Sr
C
O
Sr
HU-Ba
C
O
Ba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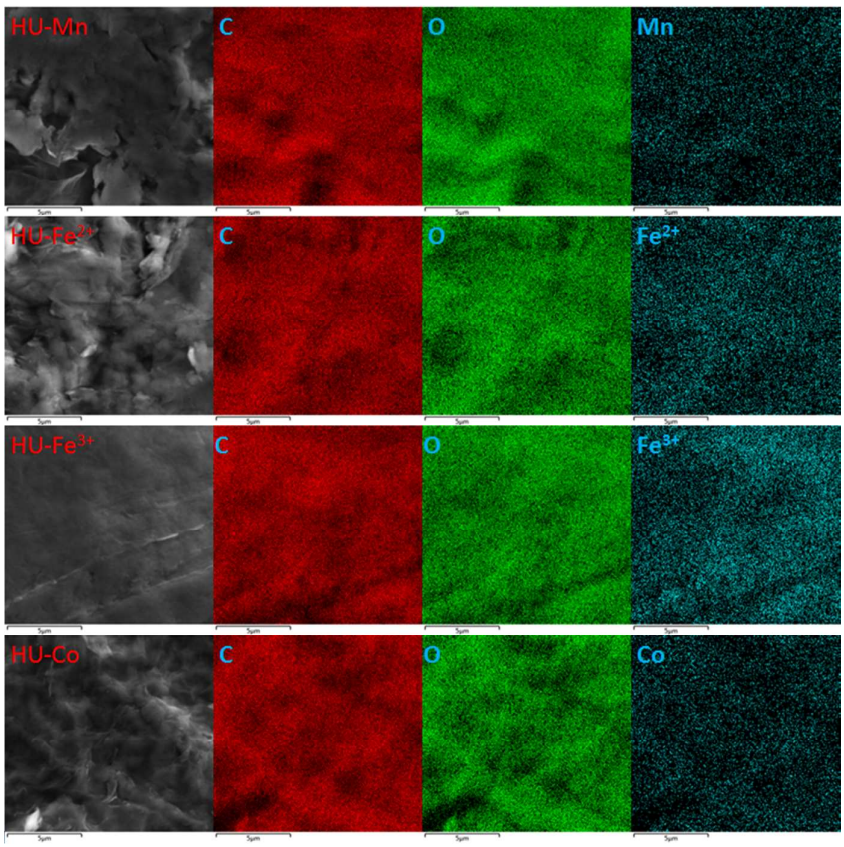
C
O
Ti
HU-V
C
O
V
HU-Cr
C
O
Cr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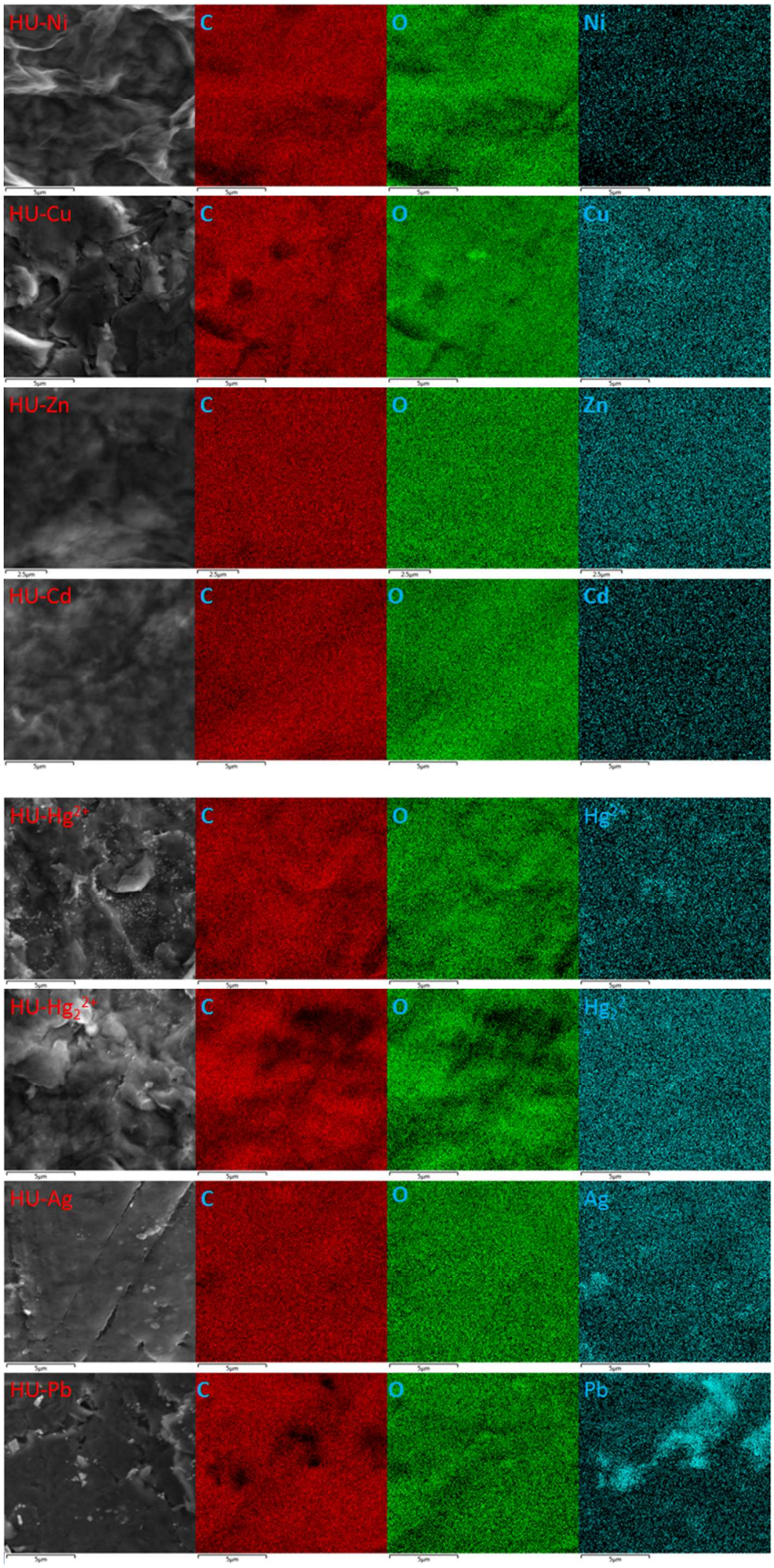
HU-Fe2+
C
O
Fe2+
HU-Fe3+
C
O
Fe3+
HU-Co
C
O
Co


HU-Ni
C
O
Ni
HU-Cu
C
O
Cu
HU-Zn
C
O
Zn
HU-Cd
C
O
Cd
HU-Hg2+
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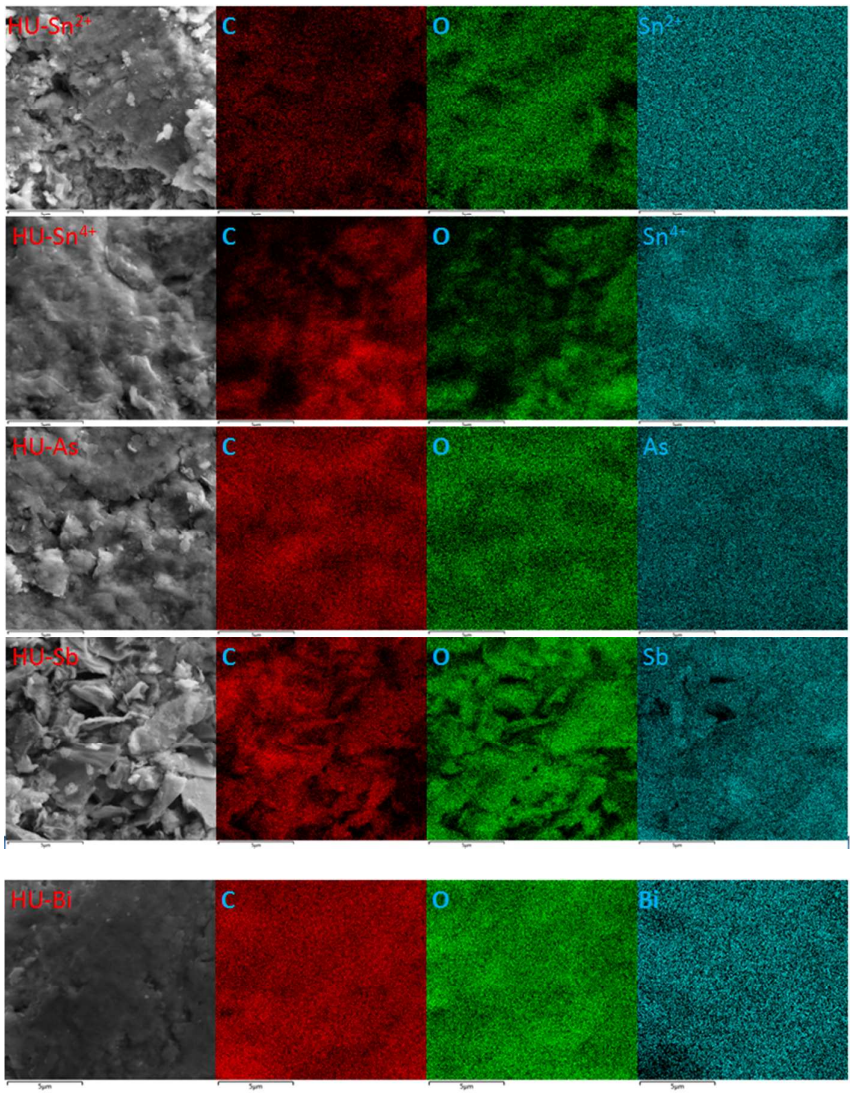
HU-Ag
C
O
Ag
HU-Pb
C
O
Pb



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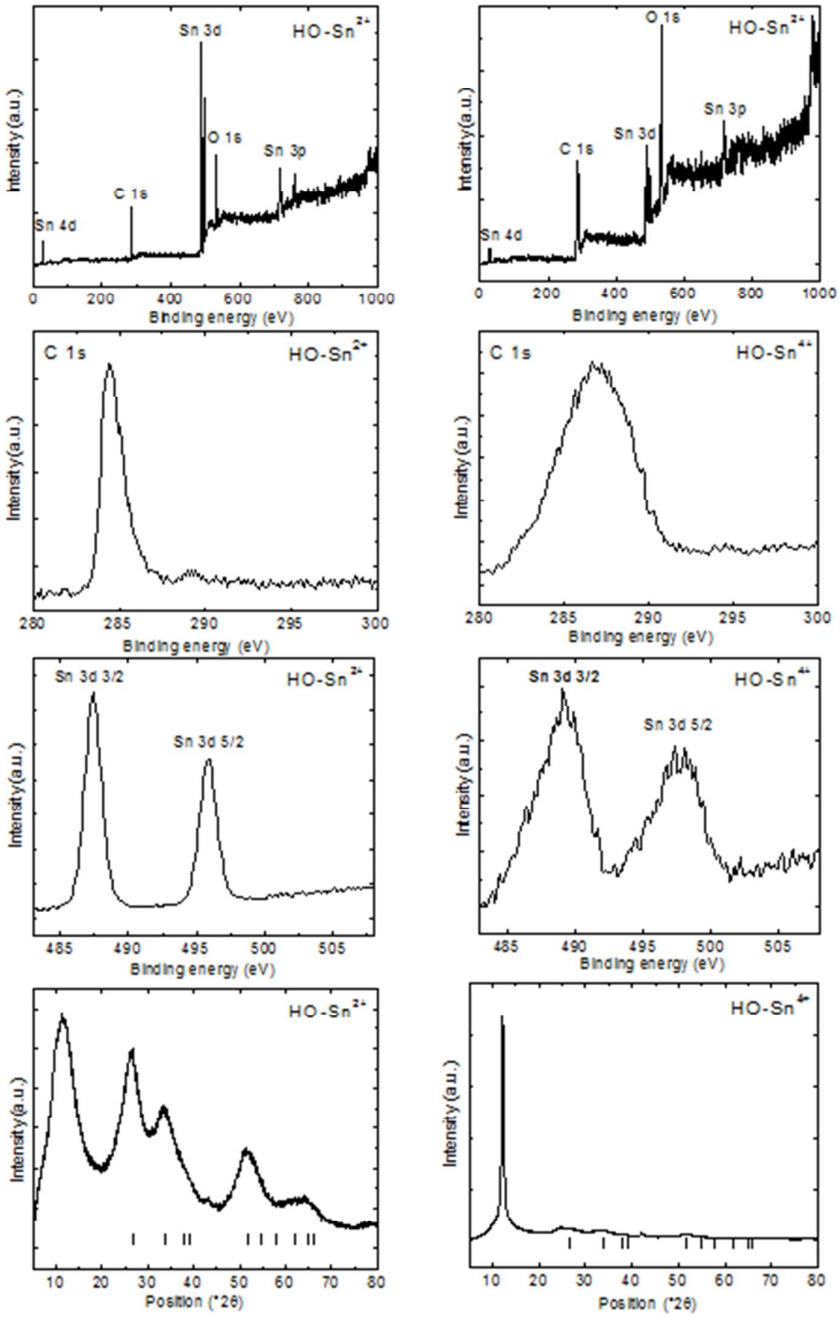

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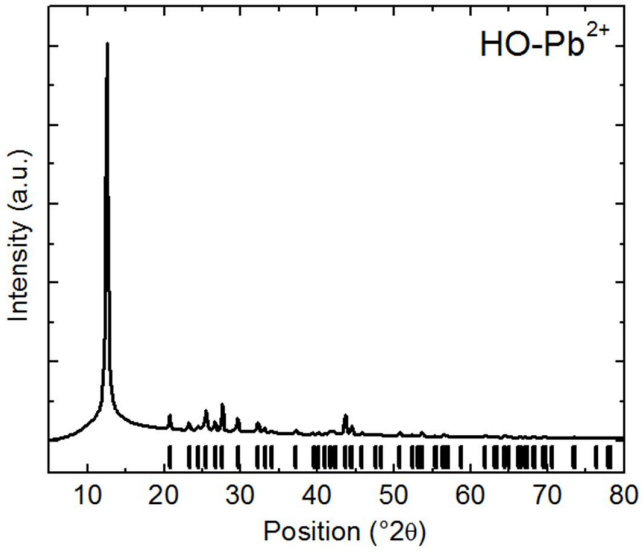

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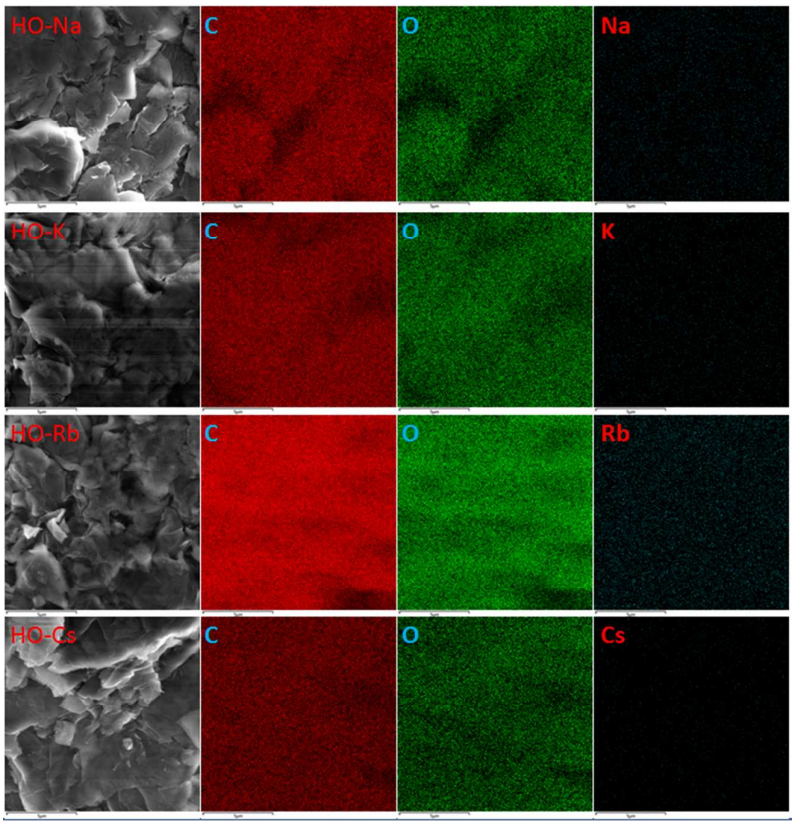
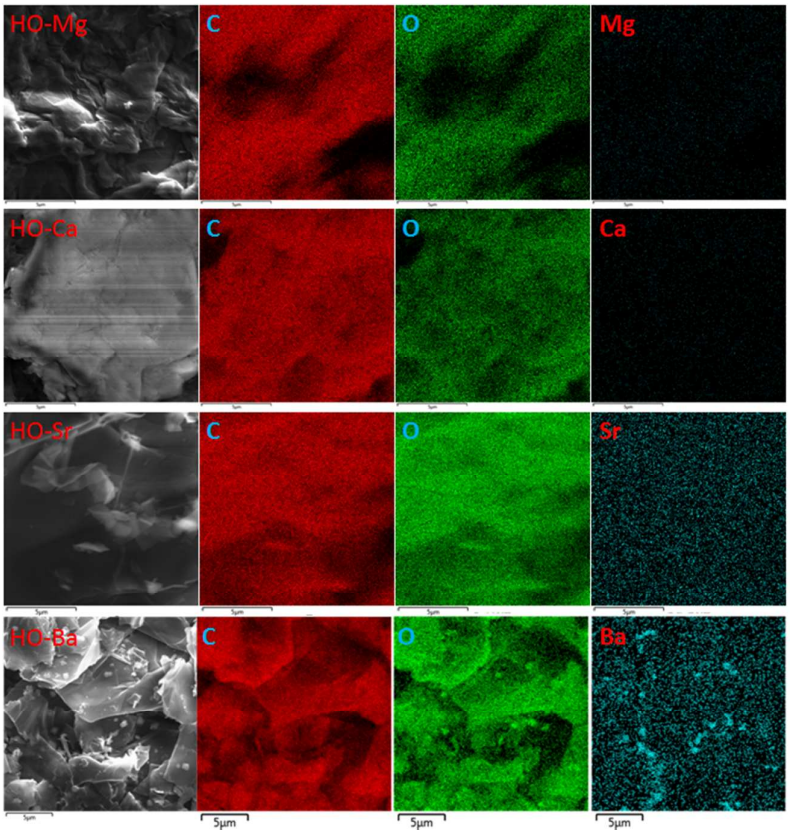
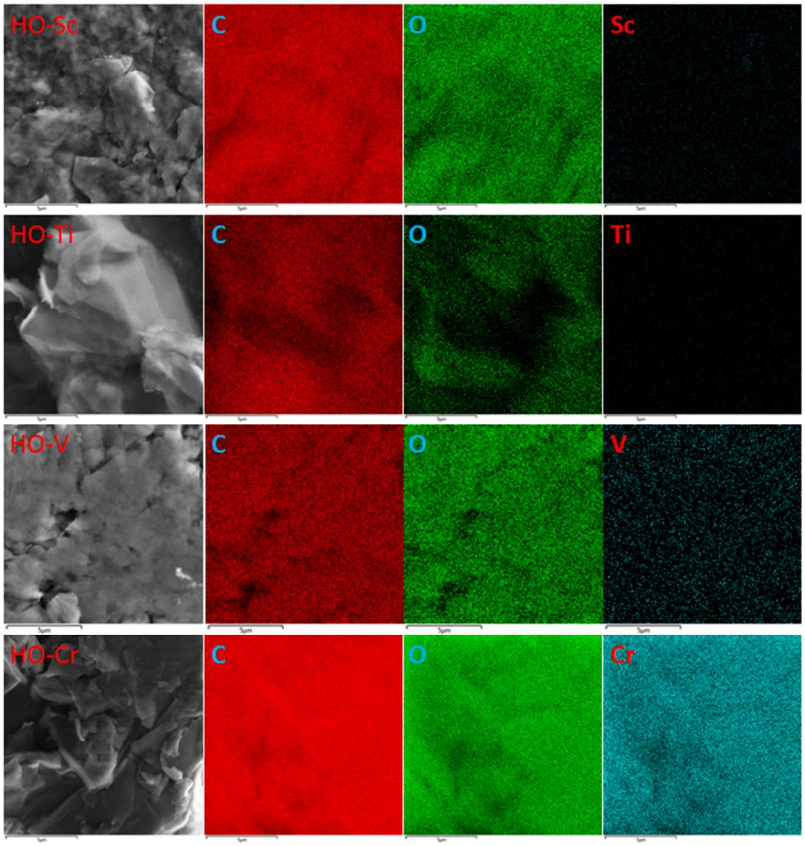
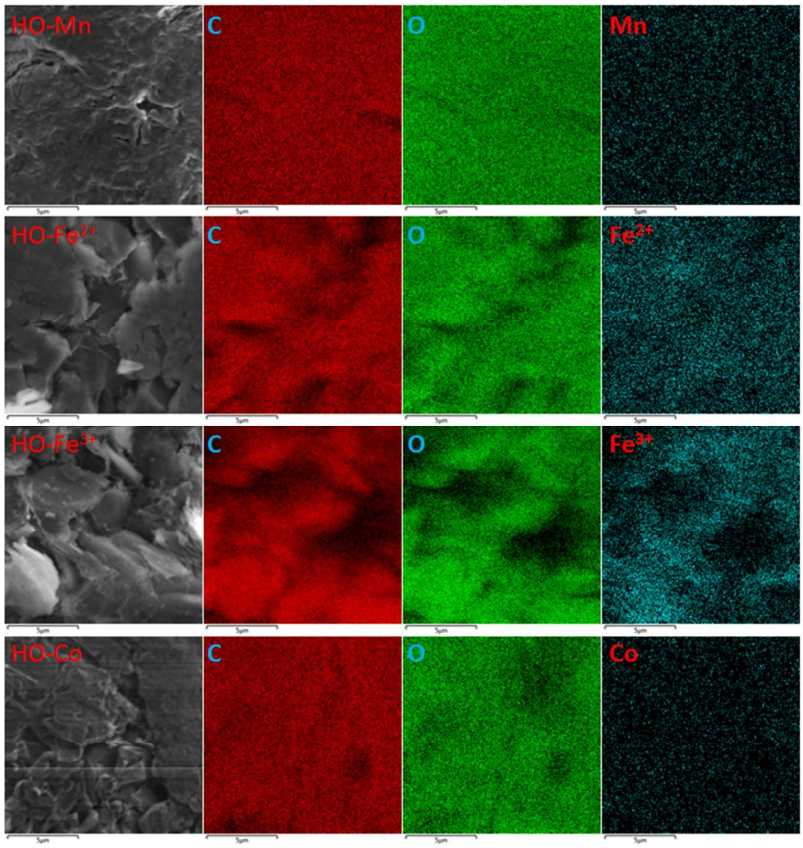
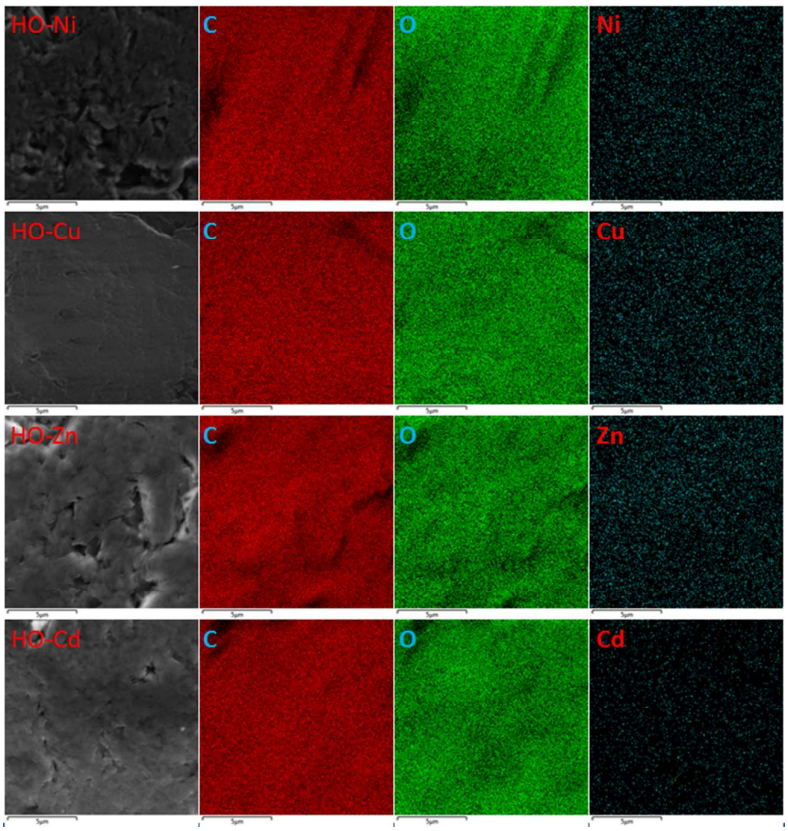
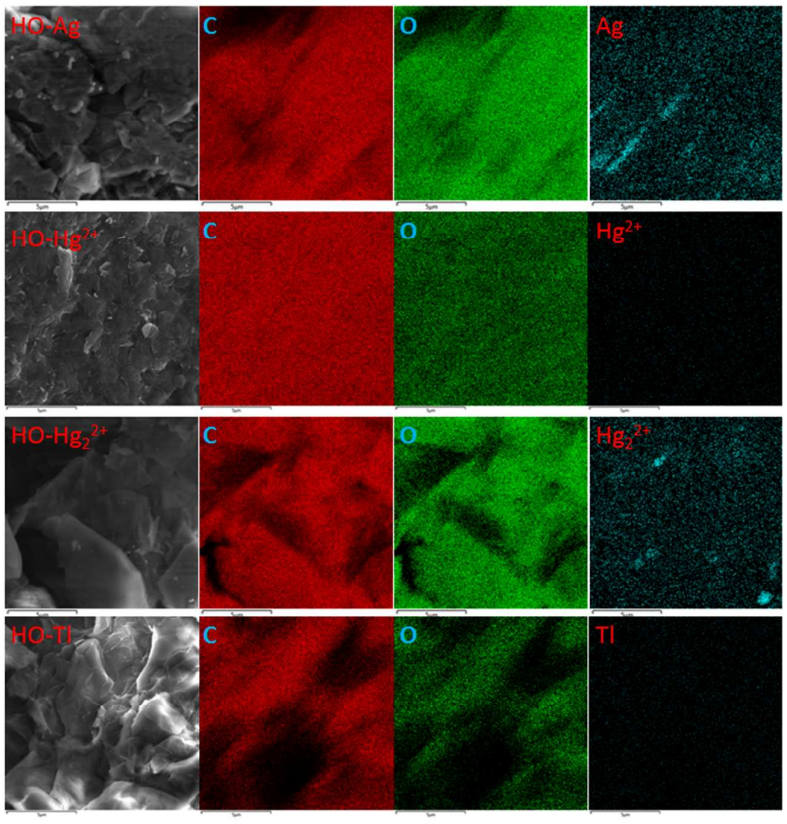

HO-Na
C
O
Na
HO-K
C
O
K
HO-Rb
C
O
Rb
HO-Cs
C
O
Cs


HO-Mg
C
O
Mg
HO-Ca
C
O
Ca
HO-Sr
C
O
Sr
HO-Ba
C
O
Ba
5µm
5µm
5µm


HO-Sc
C
O
Sc
HO-Ti
C
O
Ti
HO-V
C
O
V
HO-Cr
C
O
Cr


HO-Mn
C
O
Mn
HO-Fe2+
C
O
Fe2+
HO-Fe3+
C
O
Fe3+
HO-Co
C
O
Co


HO-Ni
C
O
Ni
HO-Cu
C
O
Cu
HO-Zn
C
O
Zn
HO-Cd
C
O
Cd


HO-Ag
C
O
Ag
HO-Hg2+
C
O
Hg2+
HO-Hg2 2+
C
O
Hg2 2+
HO-Tl
C
O
Tl

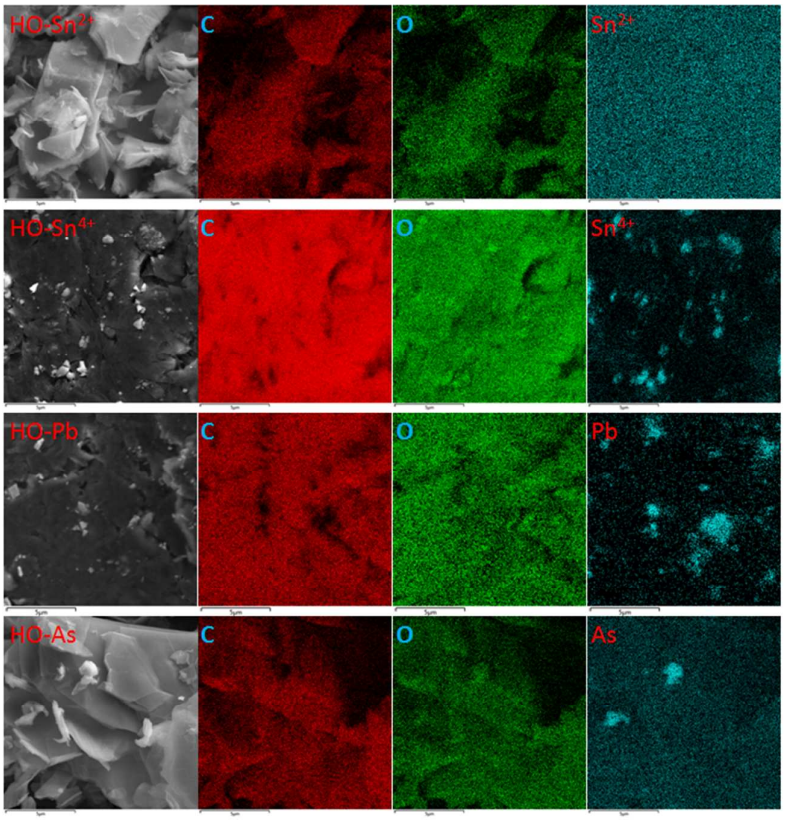


Figure S7. The EDS distribution maps of elements and corresponding SEM image of HOGO after sorption. Scale bar correspond to 5 μm. The scale bar is 5 μm.

Table S1. The results of deconvolution for XPS spectra of C 1s peak.

	HOGO	HUGO
C-C	11.2	8.5
C=C	6.6	35.0
C-O	35.4	17.3
C=O	18.3	18.9
O-C=O	12.4	12.2
π=π	16.1	8.1