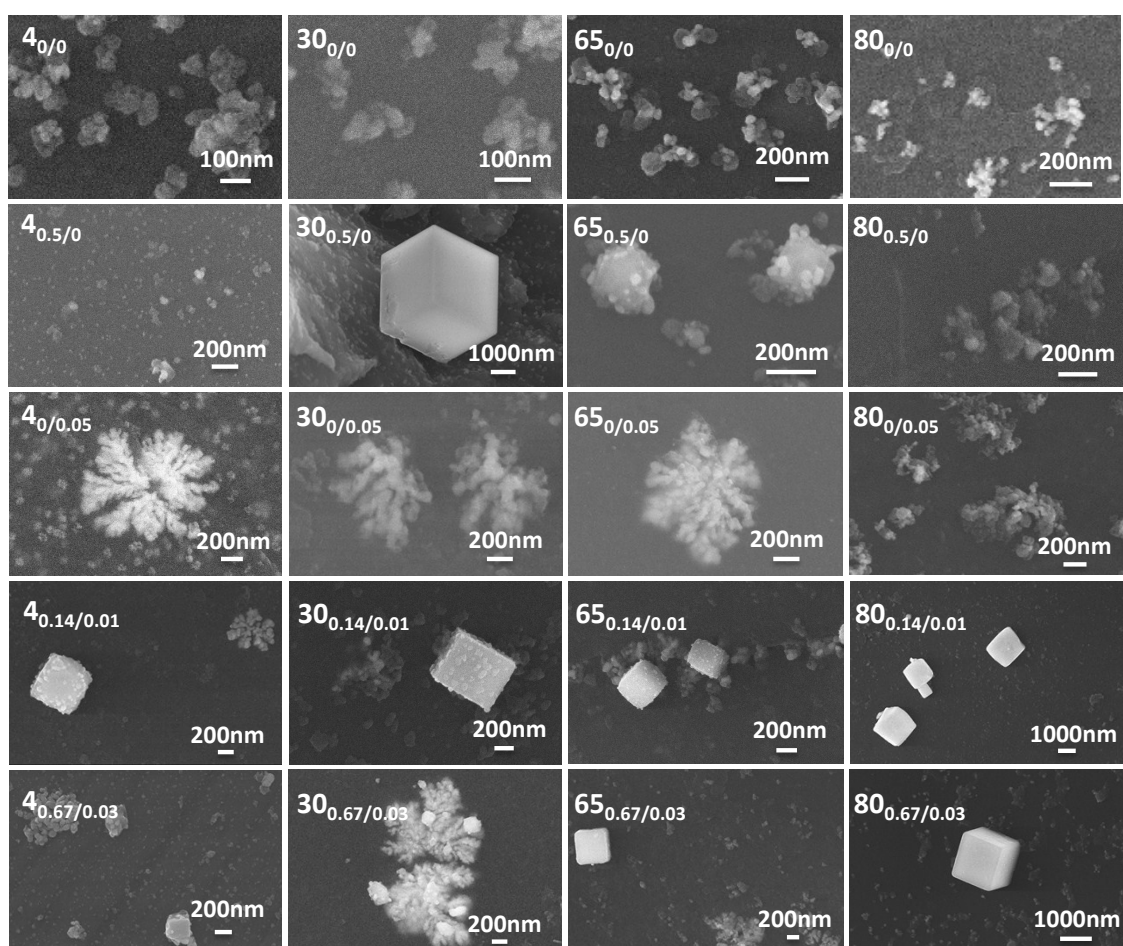


## Supplementary Information

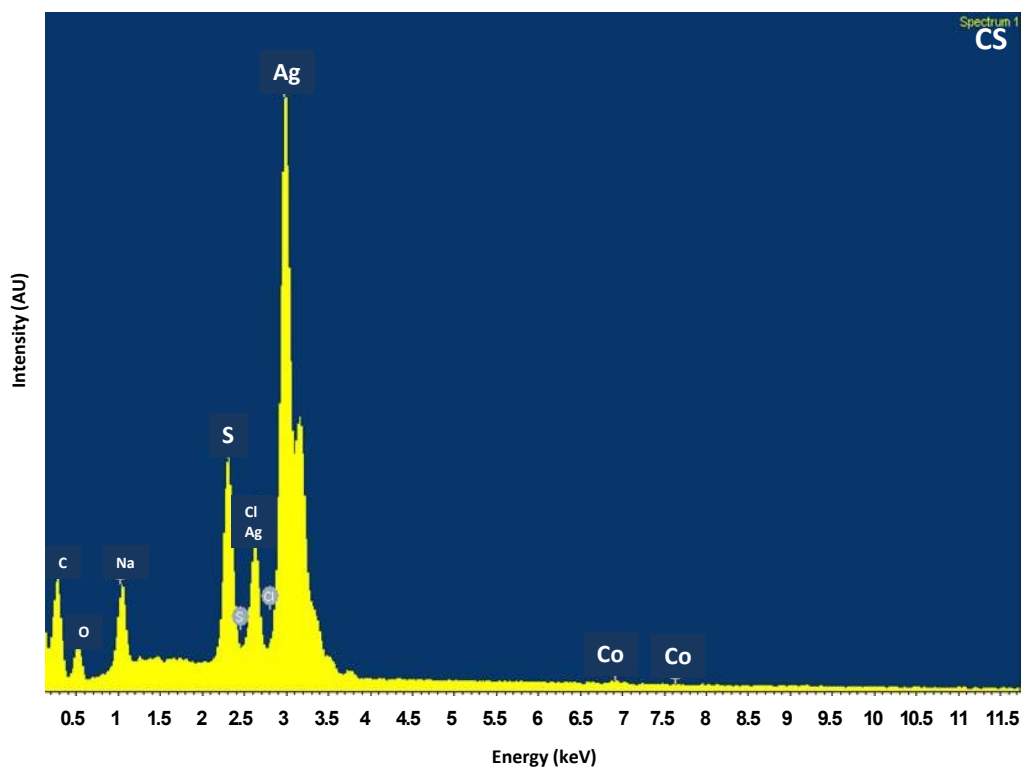
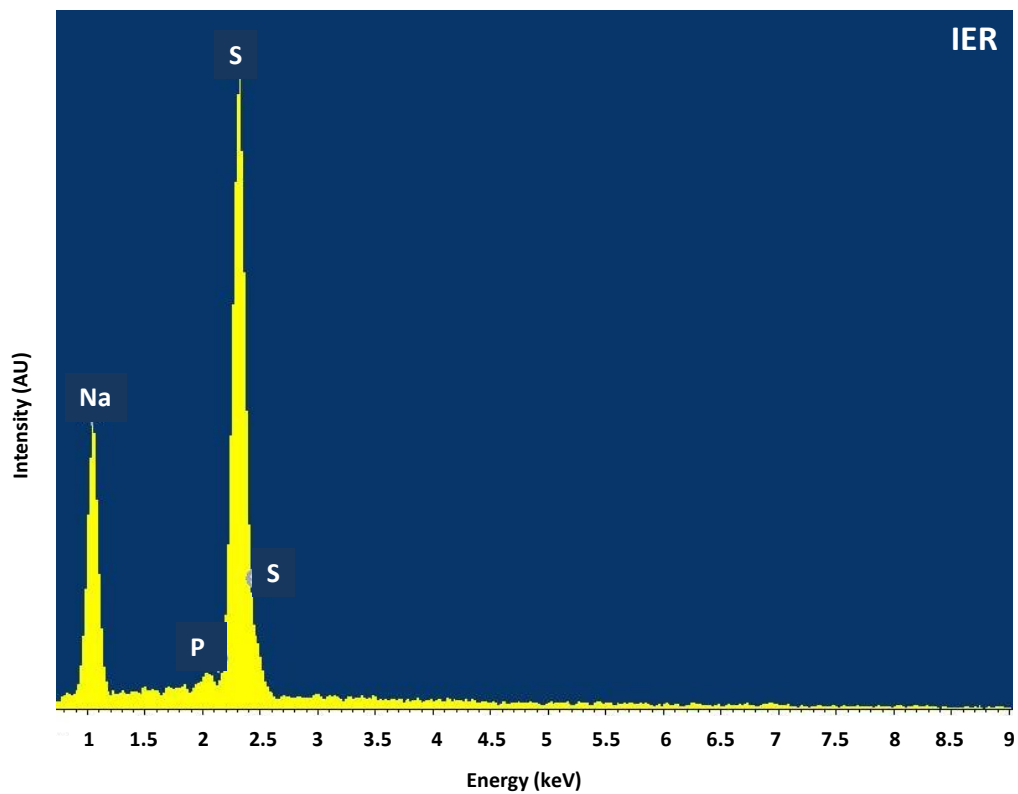
### **Activity-tunable nanocomposites based on dissolution and in situ recrystallization of nanoparticles on ion exchange resins**

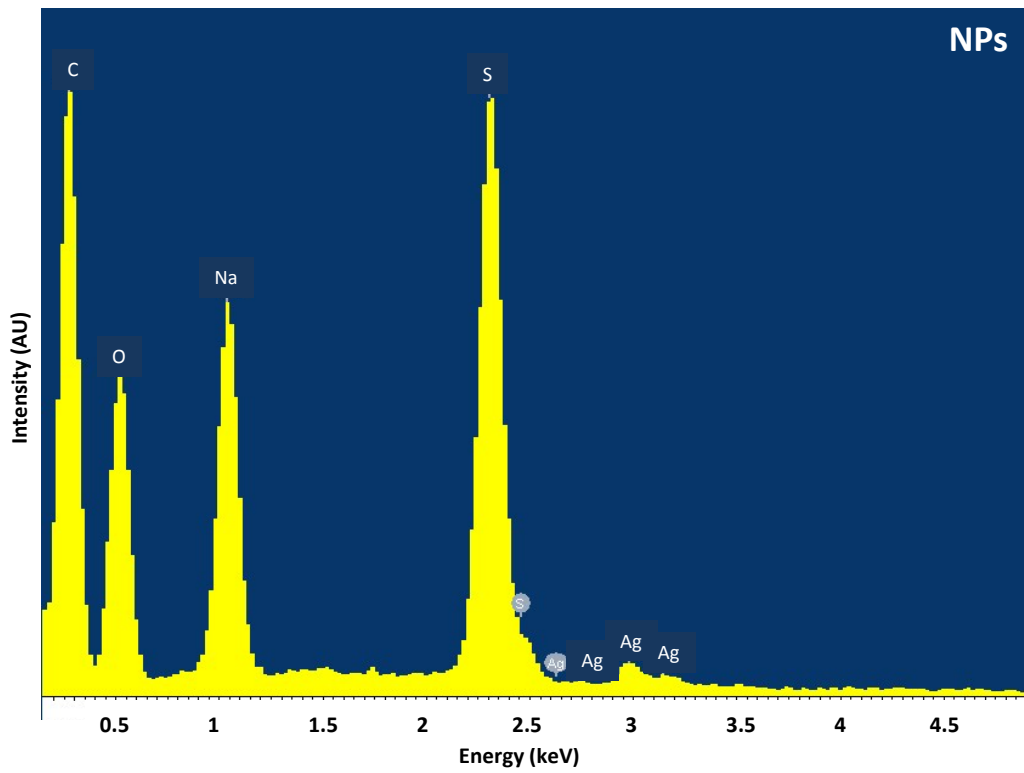
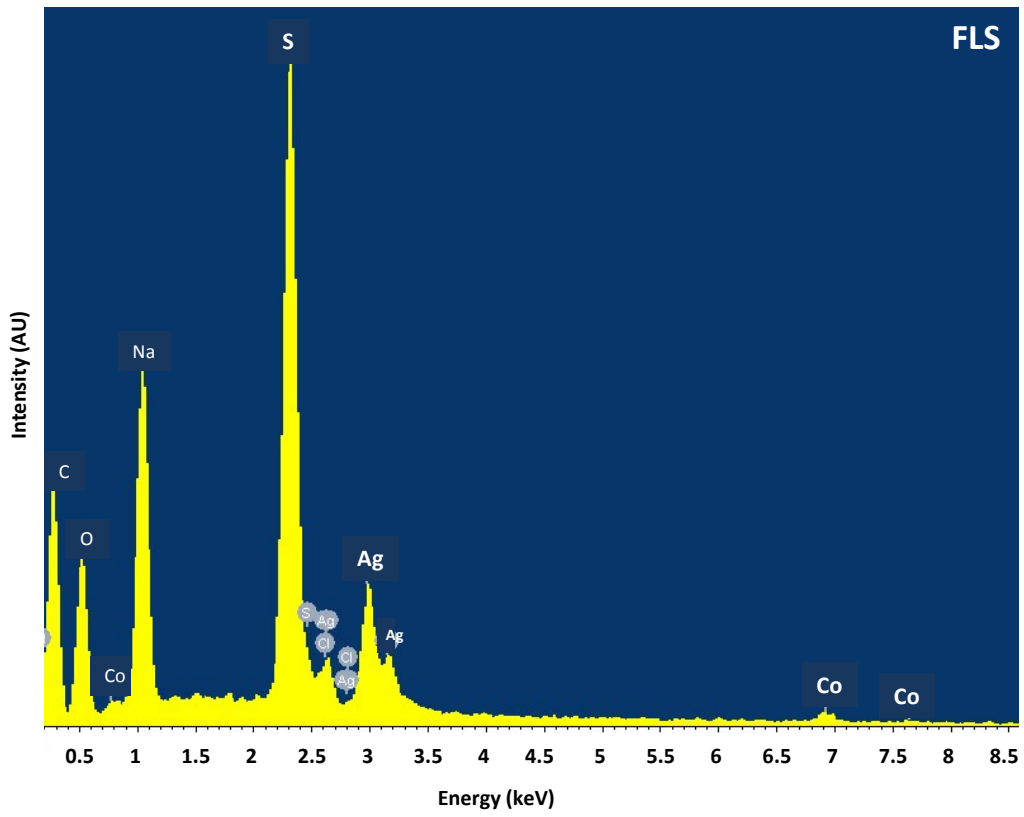
Amanda Alonso, Núria Vigués, Rosalía Rodríguez-Rodríguez, Xavier Borrísé, María Muñoz, Dmitri N. Muraviev, Jordi Mas and Xavier Muñoz-Berbel

**SI.1.** SEM images for the nanostructures obtained by modifying the incubation conditions with different chloride solution concentrations (from 0 to 1.0 M) and phosphate solution concentrations (from 0 to 0.1 M) concentrations. Incubation temperatures are modified from 4 to 80°C. In the Figure S1.1, the parameters are defined as,  $65_{0.67/0.03}$ , where 65 is the incubation temperature, 0.67 the chloride concentration and, 0.03 the phosphate concentration.



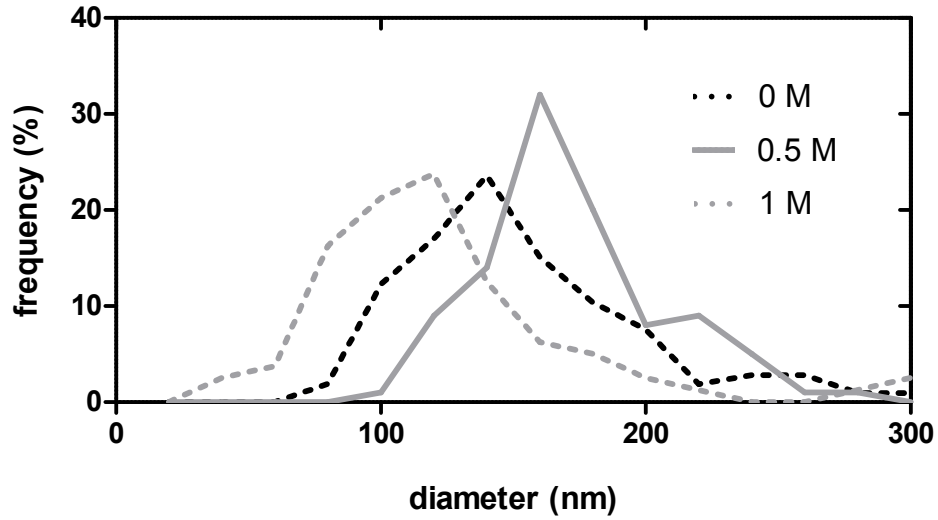
**SI.2.** EDX spectra corresponding to nanocomposites containing NPs, CSs or FLSs. The spectrum corresponding to the IER without modification is also added for comparison.





SI.3. a) Histogram representing the number of aggregates (in percentage terms) with the aggregate size for nanocomposite samples incubated in chloride samples at 30 °C. b) The average size in each case is represented with the chloride concentration.

a)



b)

