



Supplementary Materials

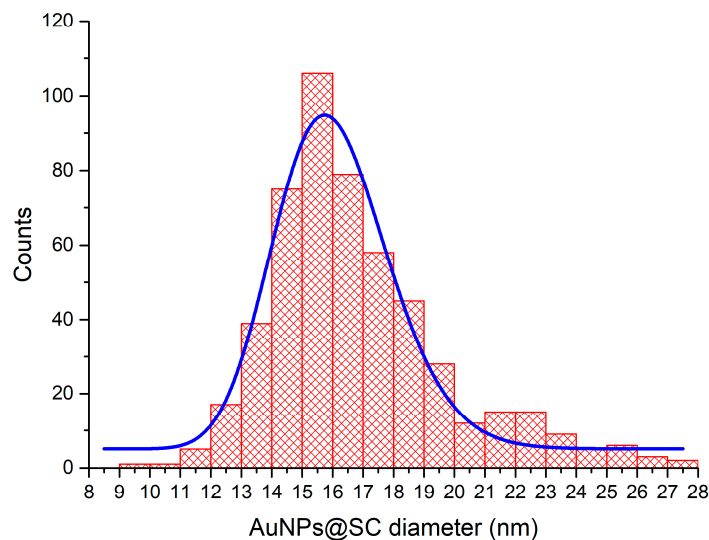
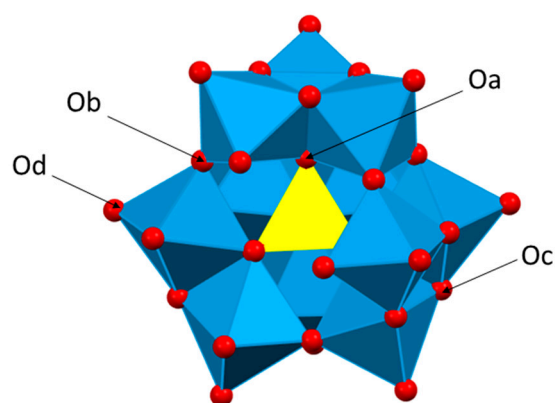


Figure S1. Histogram of citrate capped gold nanoparticles (AuNPs@SC), fitted to a LogNormal distribution with the following parameters: Center = 15.95 nm, offset = 5,06 and log standard deviation = 0.11 nm. The size distribution was obtained by measuring the size of $n = 522$ particles from three different synthesis batches in Bright Field Scanning Transmission Electron Microscopy (BF-STEM) images.

Table S1. IR peaks of different compounds synthesized compared in the last two columns with the literature.

| AuNPs@POM | AuNPs@POM@PEG | POM | POM ^{1,2} | PEG ³ |
|-----------|---------------|-------|--------------------|------------------|
| | 1350.2 | | | 1343 |
| | 1298.1 | | | 1279 |
| | 1249.9 | | | 1240 |
| | 1137.5 | | | 1130 |
| | 1095.6 | | | 1094 |
| 987.6 | 987.6 | 989,5 | 988 | |
| 943.2 | 941.3 | 943,2 | 945 | 951 |
| 869.9 | 868.0 | 872,9 | 875 | |
| 858.3 | 852.5 | 852,5 | 855 | 840 |
| 798.5 | 796.6 | 790,8 | 805 | |
| 731.0 | 727.2 | 713,7 | 730 | |
| 513.1 | 509.2 | 505,6 | | |



Scheme 1. Structure of the β_2 isomer of the monolacunary Keggin ion $[\text{SiW}_{11}\text{O}_{39}]^{8-}$ with labelling of the different oxygen atoms. WO_6 octahedra (blue) and SiO_4 tetrahedra (yellow). Adapted from (Chermette and Lefebvre, 2012).⁴

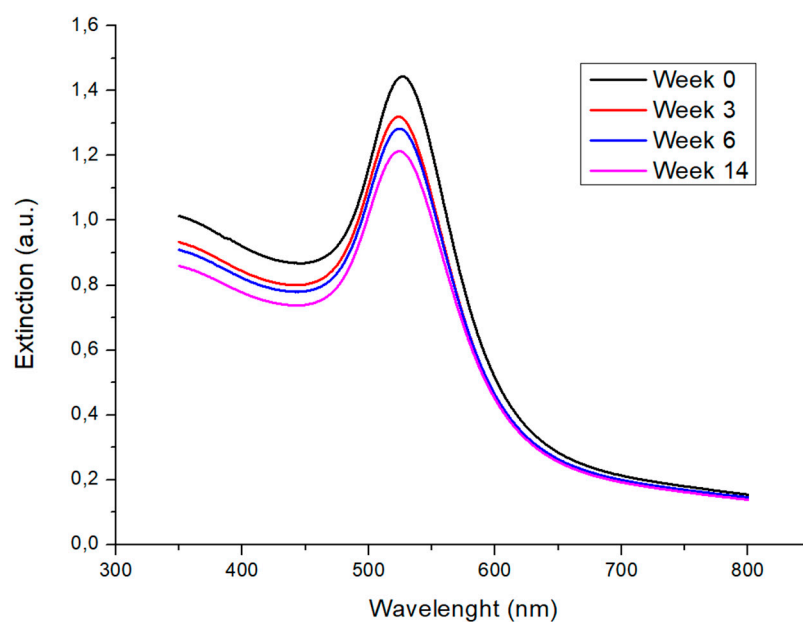


Figure S2. Non normalized UV-Vis spectra of AuNPs@POM@PEG in PBS after up to 14 weeks, showing particle long-term stability.

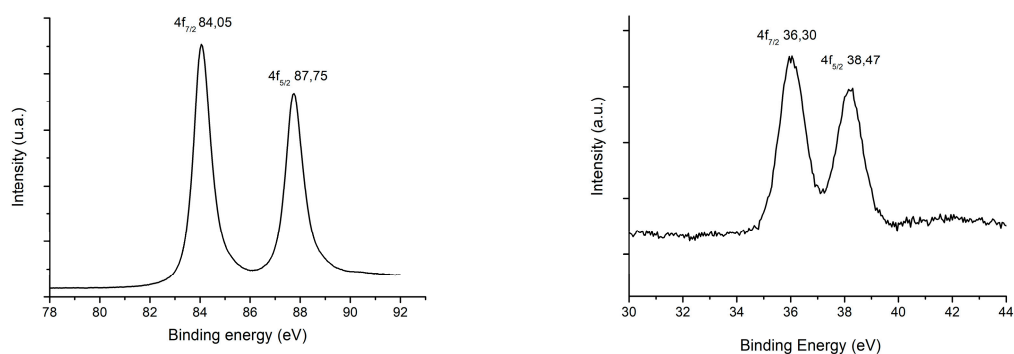


Figure S3. XPS spectra of AuNPs@POM. On the left, Au peaks. On the right, W peaks.

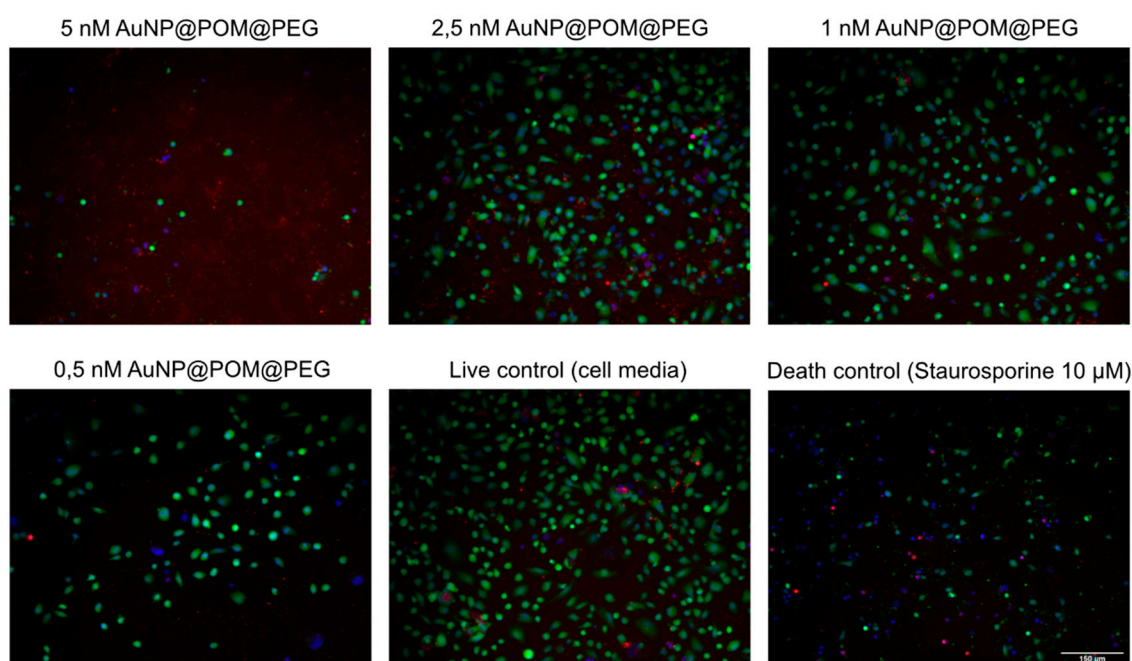


Figure S4. Representative fluorescence images of the Live/Dead assay obtained for endothelial cells under different treatment conditions. Green, red and blue signal indicate alive, death cells and cell nuclei, respectively.

References

1. A. Tézé and G. Hervé, *Journal of Inorganic and Nuclear Chemistry*, 1977, 39, 999–1002.
2. Alvin P. Ginsberg, Ed., *Inorganic Syntheses*, John Wiley & Sons Ltd, New York, 1991.
3. K. Shameli, M. Bin Ahmad, S. D. Jazayeri, S. Sedaghat, P. Shabanzadeh, H. Jahangirian, M. Mahdavi and Y. Abdollahi, *Int J Mol Sci*, 2012, 13, 6639–6650.
4. H. Chermette and F. Lefebvre, *Comptes Rendus Chimie*, 2012, 15, 143–151.