

Supporting Information

Mimicking nature's strategies for the design of nanocatalysts

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| Entry | Peptide | Peptide Sequence | Specificity | Particle Shape | Reference |
|-------|---------|------------------------|----------------------|---|-------------|
| 1 | Pd4 | TSNAVHPTLRHL | Pd | Spherical nanoparticles | 7b, 24 |
| 2 | A6 | TSNAVAPTLRHL | Pd | Spherical nanoparticles | 3a |
| 3 | A11 | TSNAVHPTLRAL | Pd | Spherical nanoparticles | 3a |
| 4 | A6,11 | TSNAVAPTLRAL | Pd | Spherical nanoparticles | 3a |
| 5 | R5 | SSKKSGSYSGKSGSKRRIL | Pd, SiO ₂ | Spheres, 1-D Nanoribbons and Nanoparticle Networks (NPNs) | 3b, 23, 30b |
| 6 | T7 | TLTTLN | Pt | Pt Nanocubes | 22a |
| 7 | S7 | SSFPEPD | Pt | Pt Nanotetrahedrons | 22a |
| 8 | BP7A | TLHVSSY | Pt | Pt Bipods, Tripods and Tetrapods | 22b |
| 9 | A3 | AYSSGAPPMPFF | Au | Peptide coated Spherical nanoparticles | 13 |
| 10 | FigA3 | DYKDDDDKPAYSSGAPPMPFF | Au and Pd | Spherical nanoparticles | 7d |
| 11 | FigA3C | DYKDDDDKPAYSSGAPPMPFFC | CdS and Pt | Spheroidal nanoparticles | 7c |

Table S1. Materials-directing peptides discussed in the perspective and their target materials