

Shape-Defined Nanodimers by Tailored Heterometallic Epitaxy

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Supplementary information

Figure S1. Representative TEM image of HDs obtained at room temperature for 120h.

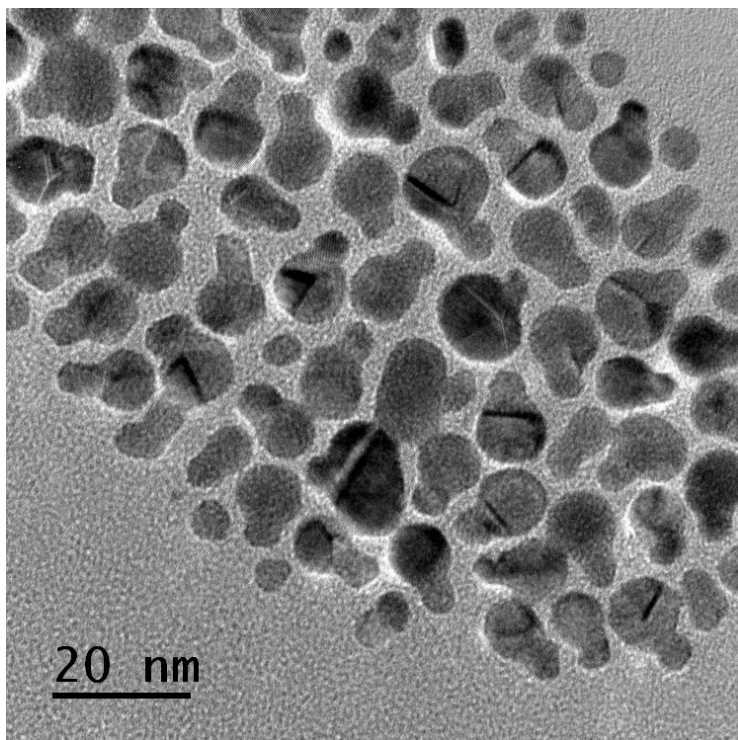


Figure S2. Representative TEM image of cubeoctahedrally-derived HDs obtained through reaction at 60 °C for 5h

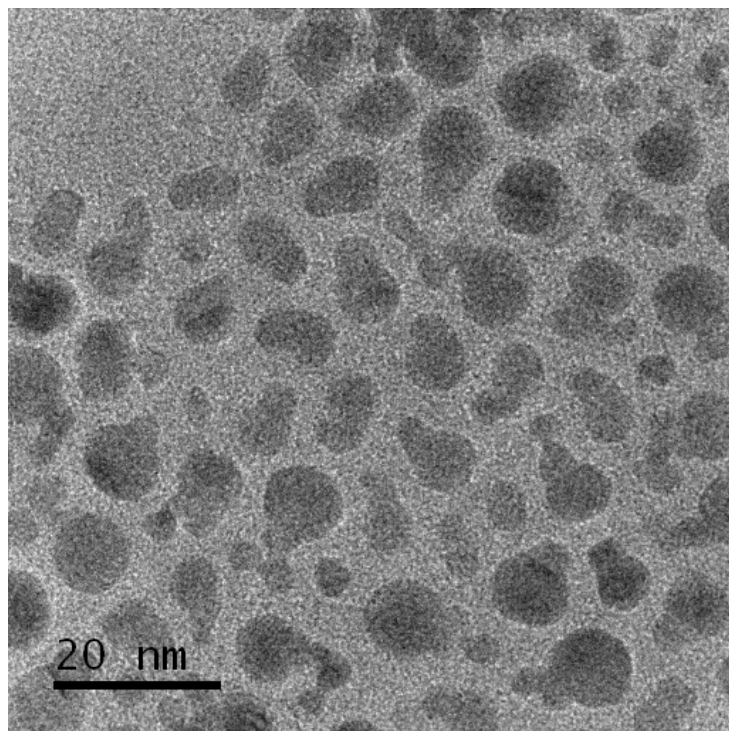


Figure S3. Representative TEM image of the sample composed of octahedrally-derived HDs as well as the two different products highlighted in the image.

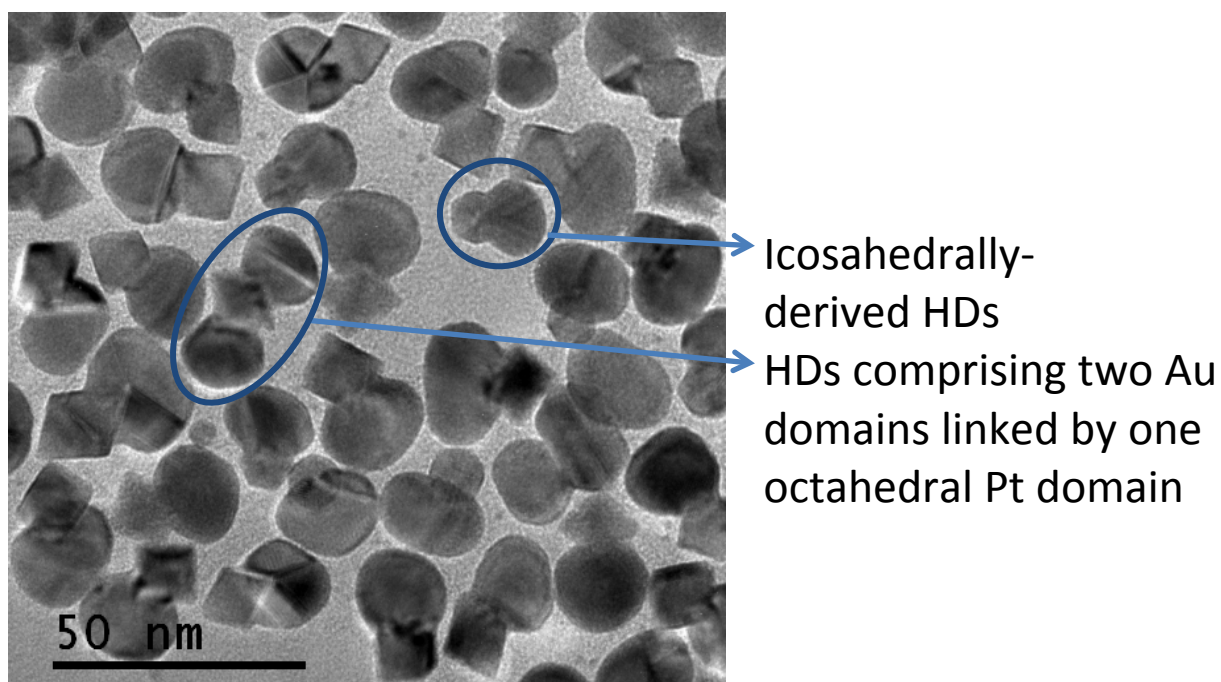
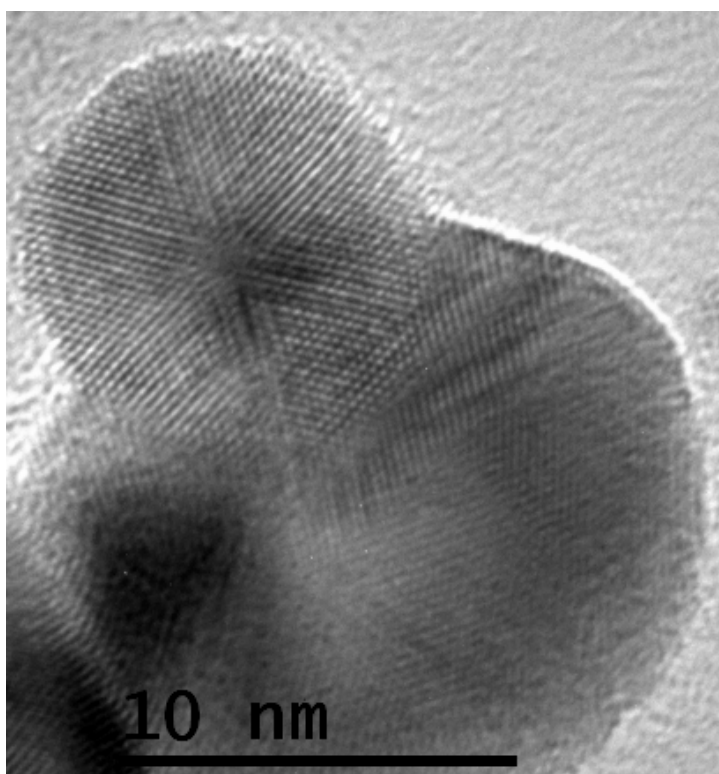


Figure S4. Representative HRTEM image of icosahedrally-derived HDs



Size measurements

The sizes of Pt seeds and HDs were analysed using Gatan Digital Micrograph software by examining at least 100 particles from several TEM images. HD sizes were measured separately for each domain type in order to notice possible size changes with respect to the initial Pt seed. Data was then used to construct particle size distributions with OriginPro 8.0.

Table S1. Average domain sizes in different Au-Pt HDs and Pt seeds

Sample	Pt domain		Au domain	
	Size (nm)	Standard deviation	Size (nm)	Standard deviation
Cubeoctahedra seed	4.40	0.60		
Octahedra seed	11.2	1.0		
Octapods seed	12.5	1.0		
Cubectahedrally- derived HDs	4.67	0.74	8.39	1.4
Octahedrally- derived HDs	12.5	2.0	16.0	2.4
Octapodally-derived HDs	12.3	1.6	14.1	3.2

Size distributions

