Supplimentery materials

Difference in the catalytic activity of atoms in the corners and at the edges of gold nanoparticles: hydrogen isotope exchange reaction

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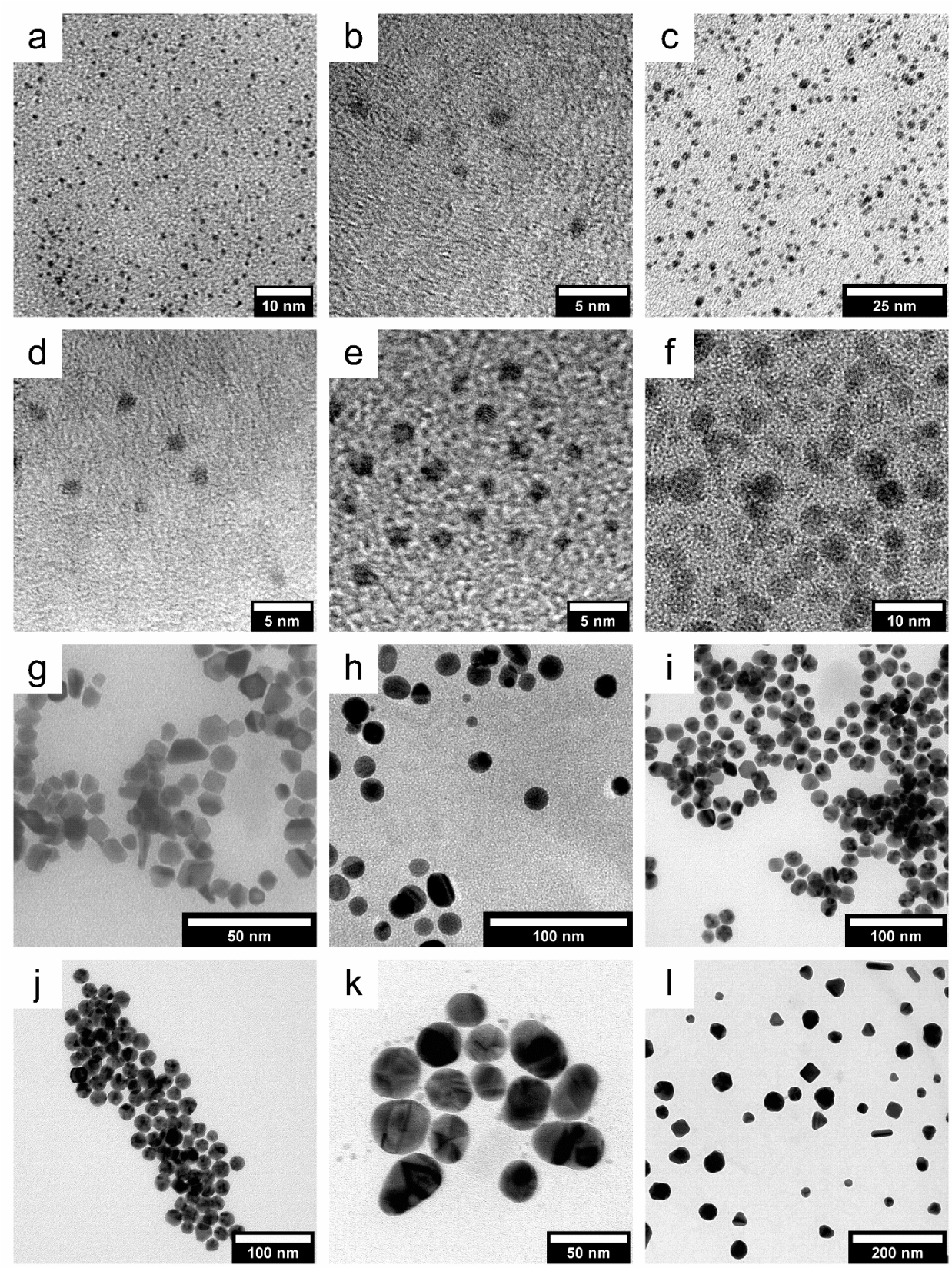


Figure S1. TEM images with different sizes, nm: a – 0.7; b – 0.9; c –1.0; d – 1.1; e – 1.4; f – 4.6; g – 7.4; h – 14.4; i – 19.4; j – 20.5; k – 28.3; l – 40.1.

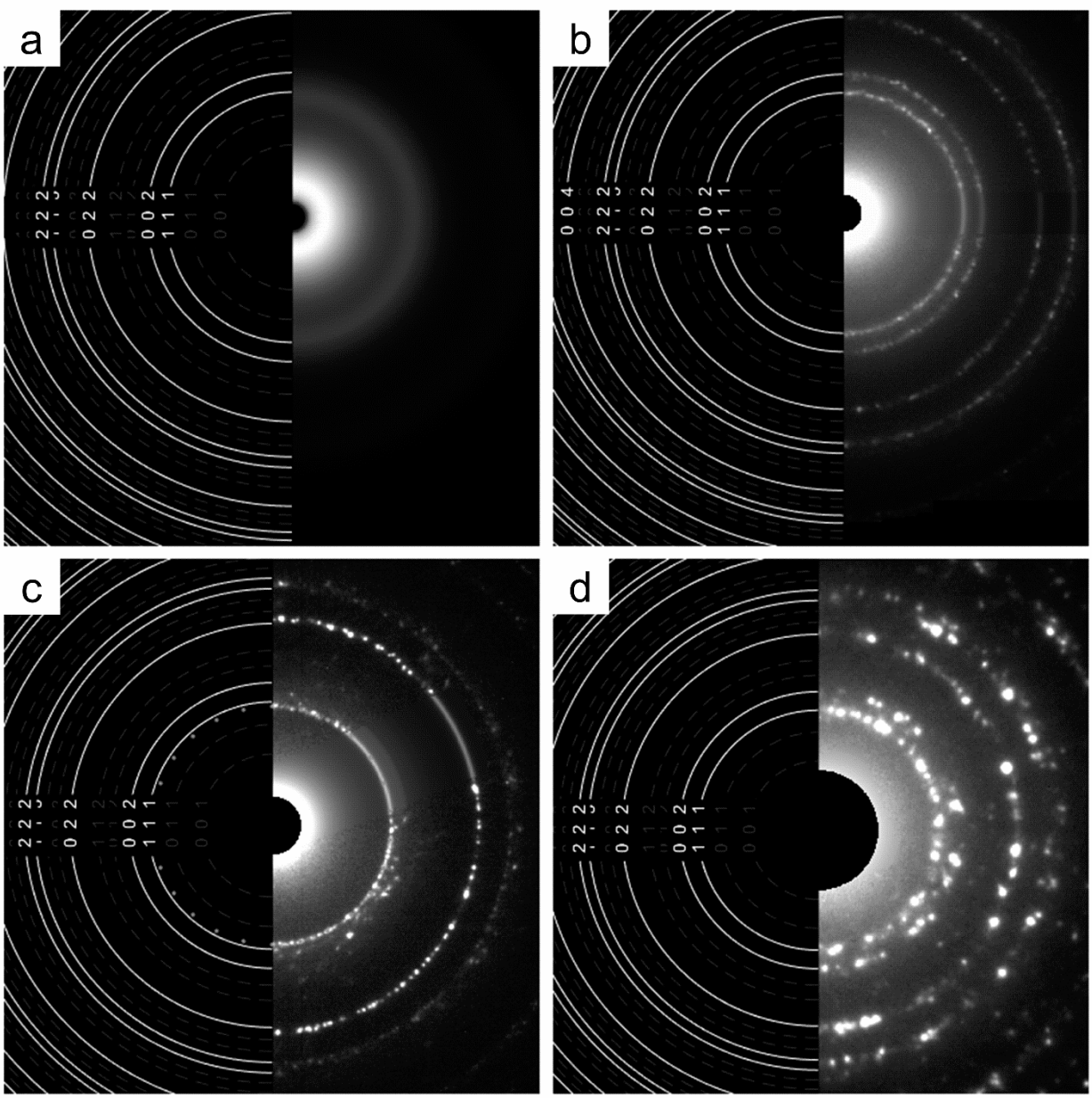


Figure S2. SAED pattern images: a – 1.4 nm; b – 7.4 nm; c – 20.5 nm; d – 40.1 nm.

Table S1. Lattice parameters of Au NPs[a].

d, nm	Lattice spacing, Å				Lattice parameter, Å
	111	200	220	311	
1.4	2.38	-	-	-	4.12
7.4	2.35	2.03	1.43	1.22	4.06
14.4	2.37	2.06	1.47	1.23	4.07
40.1	2.33	2.03	1.43	1.21	4.04
Theor., Å	2.36	2.04	1.44	1.23	4.08

[a] calculated from Fig. S2.

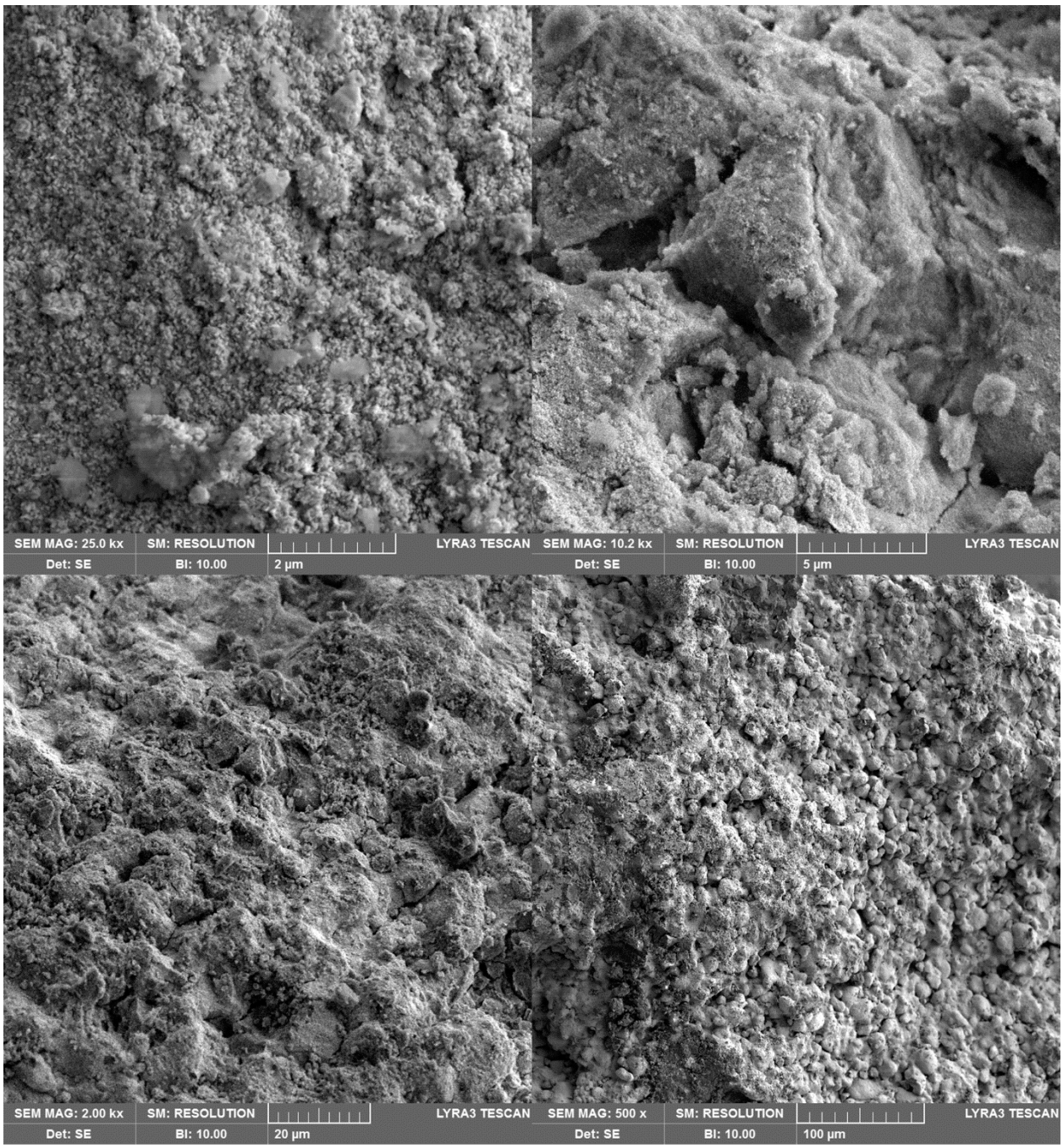


Figure S3. SEM images of $Au@Al_2O_3$ catalyst at different magnifications.

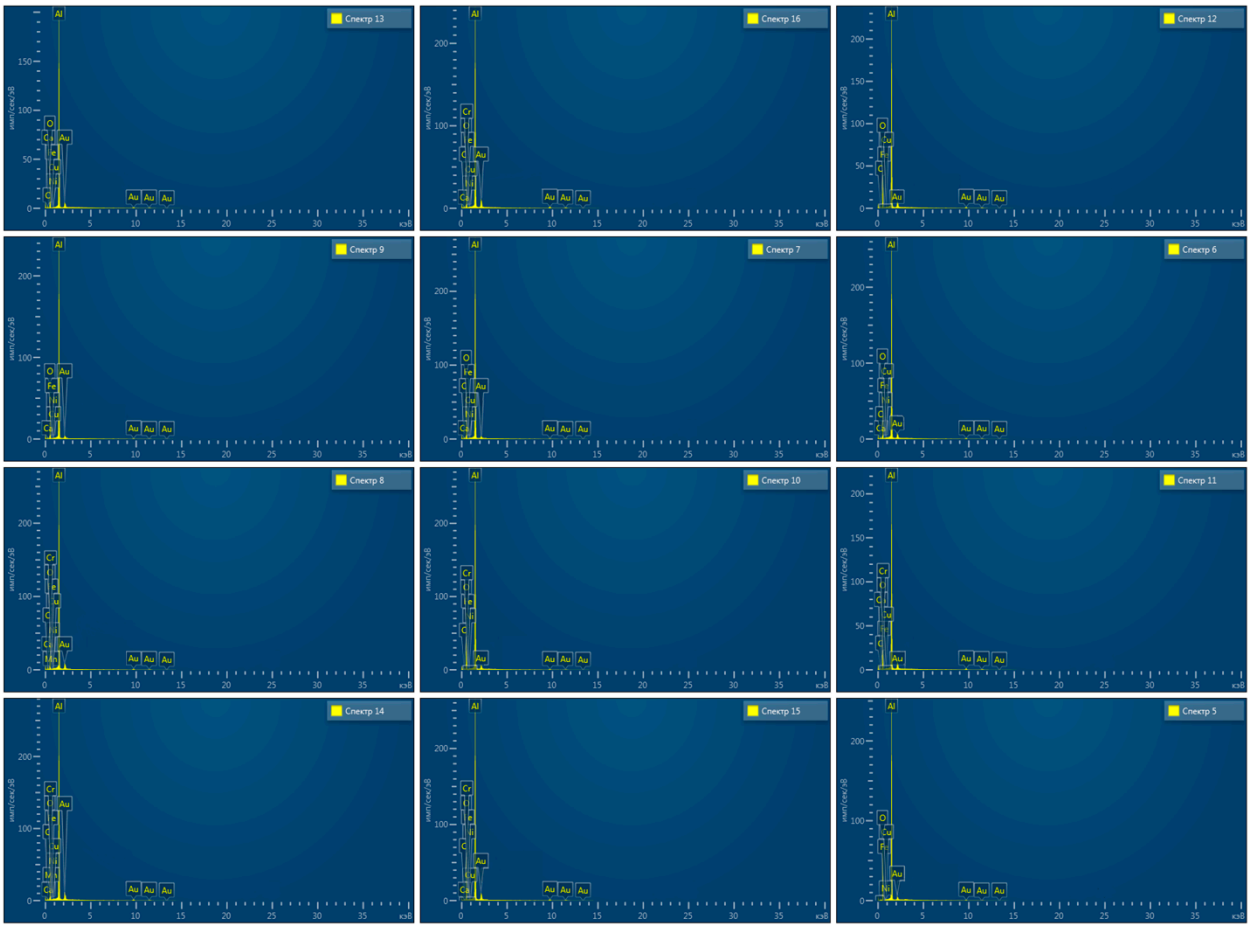


Figure S4. EDX spectra of Au@Al_2O_3 catalyst: a – 0.7 nm; b – 0.9 nm; c –1.0 nm; d – 1.1 nm; e – 1.4 nm; f – 4.6 nm; g – 7.4 nm; h – 14.4 nm; i – 19.4 nm; j – 20.5 nm; k – 28.3 nm; l – 40.1 nm.