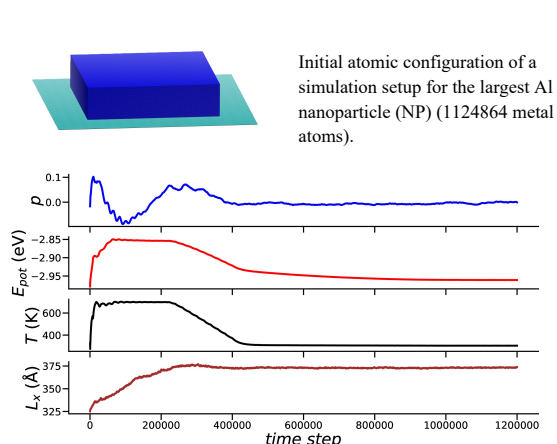


Atomic-scale contact mechanics of Al and Cu nanoislands

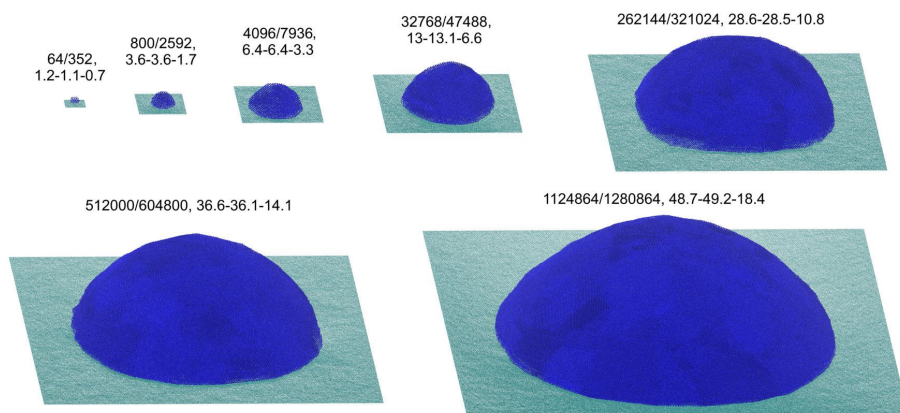
M. V. Prodanov, O. V. Khomenko

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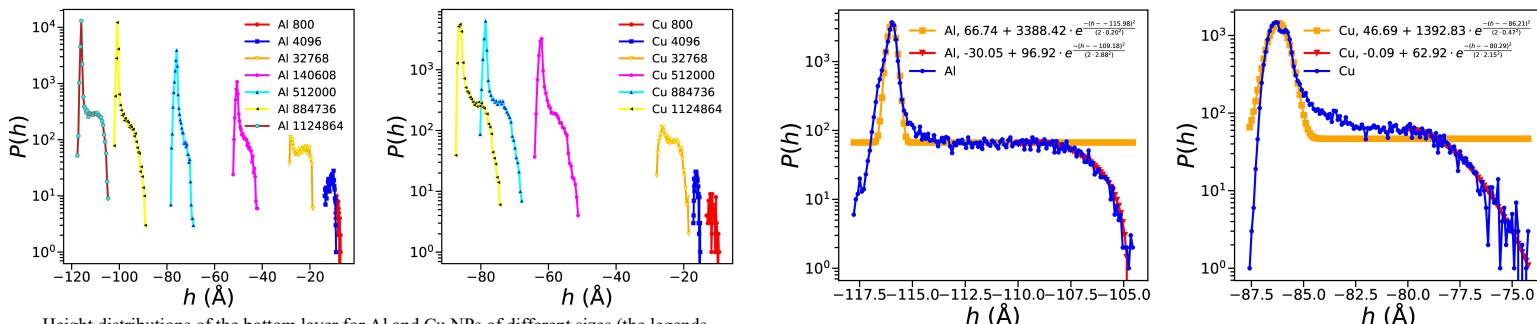
Time dependencies of the total impulse, potential energy, temperature, and lateral size of an Al NP containing 512000 atoms.

Model

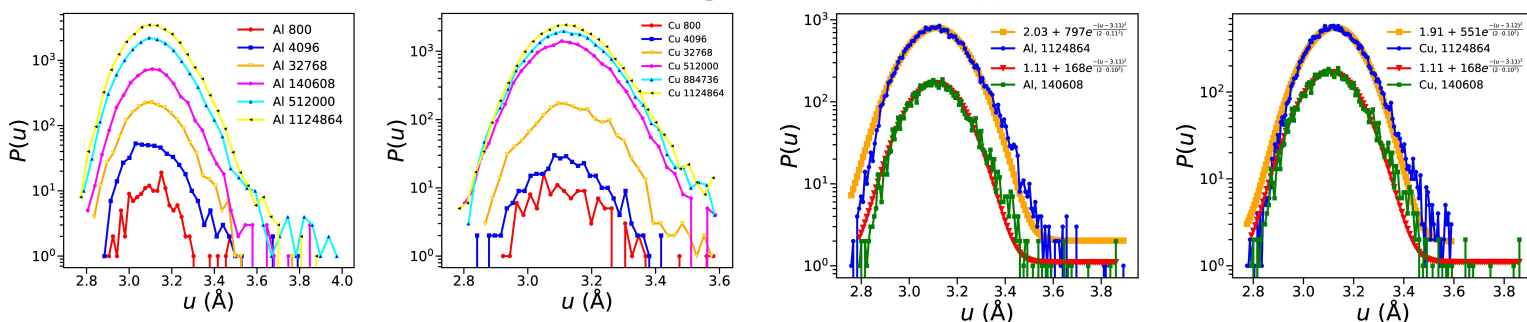


Al NPs of different sizes. The notations in the figure: number of metal atoms N /total number of atoms N_0 , NP sizes $L_x-L_y-L_z$ in nm.

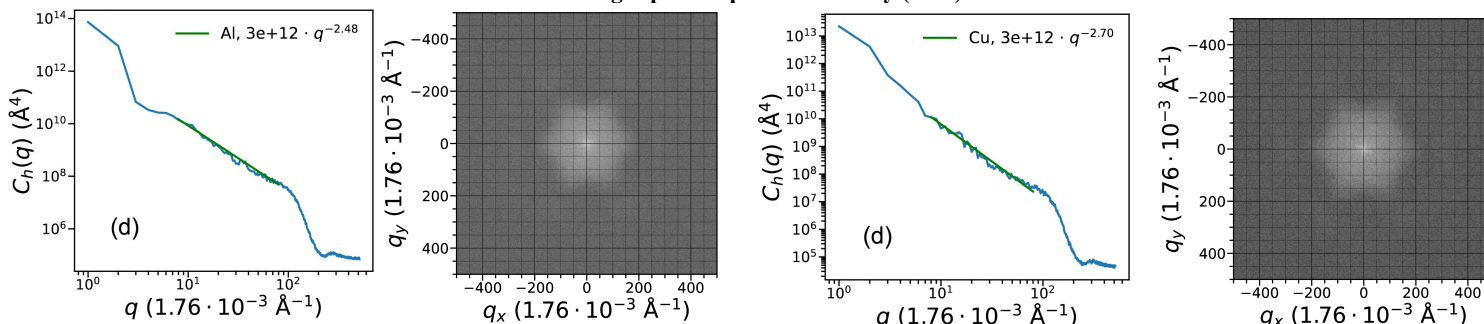
Contact mechanics: Contact surface height h distributions $P(h)$



Interfacial separation u distributions $P(u)$



Height power spectrum density (PSD)



Full-paper links:

<https://doi.org/10.1039/D6CP00886K> (Physical Chemistry Chemical Physics, 2026, accepted), <https://arxiv.org/abs/2604.07646>