

SUPPORTING INFORMATION

Optical Properties of Nested Pyramidal Nanoshells

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Table 1. Au to Cr ratio in nested pyramidal shells correlated with etching time

etching time (s)	Cr (atomic %)	Au (atomic %)
0	49	51
30	25	75
45	12	88
60	1	99
80	0	100

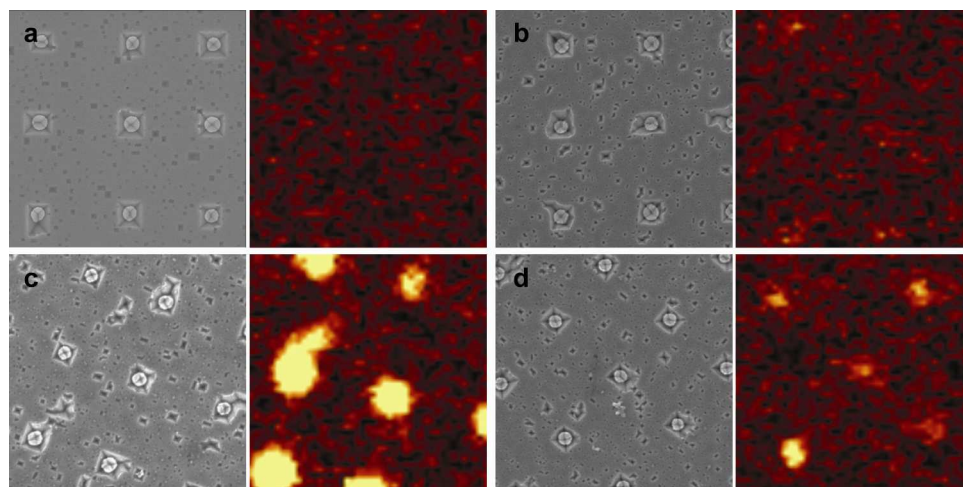


Figure S1. SEM images and corresponding Raman intensity maps of (a) single 40 nm Au, (b) collapsed nested (gap = 5 nm), (c) nested (gap = 30 nm), and (d) Au-Cr-Au (20-45-20 nm) multi-layered pyramidal shells. SEM and Raman image areas are $5 \mu\text{m} \times 5 \mu\text{m}$.