Au nanocone array with 3D hotpots for biomarker chip

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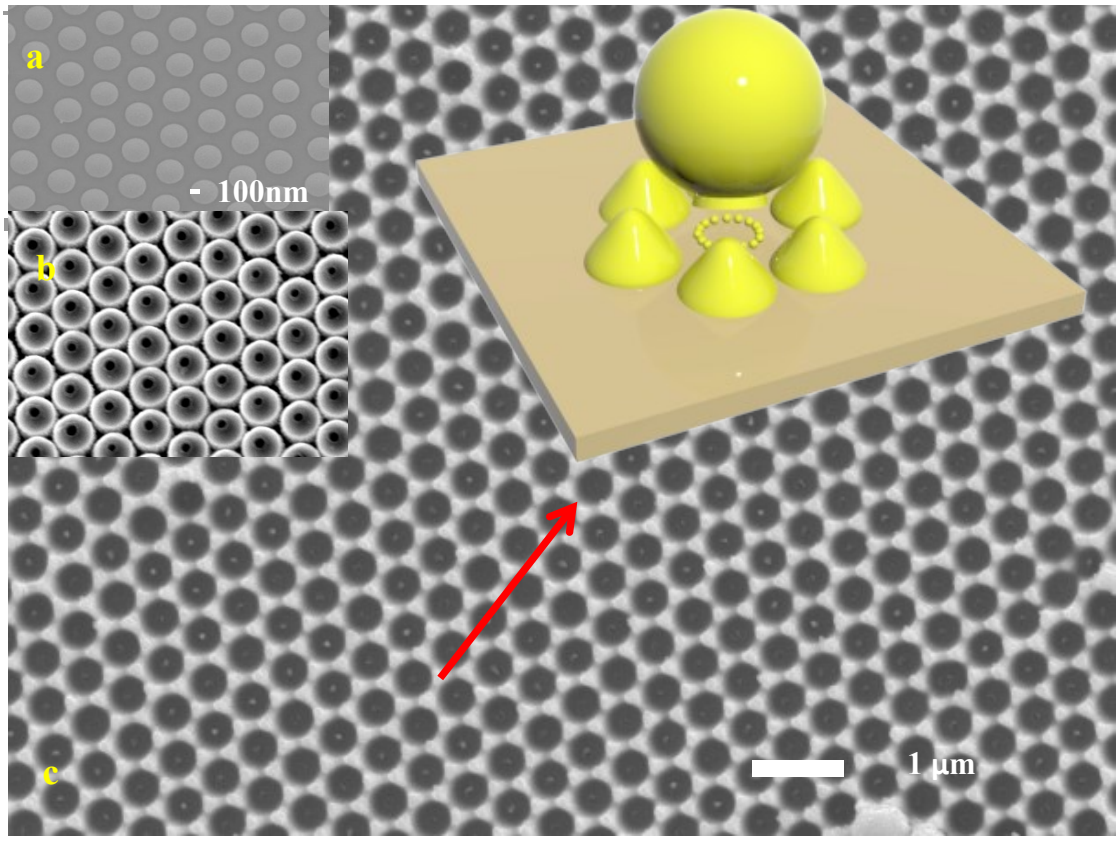

Figure S1. Figure a is a PS beads etched for 3 min with a diameter of 420 nm. Figure B is the base obtained by adhesive tape with PS beads. Figure c shows the substrate formed by the nanohole array as the inclined nanocone array.

(a)

40°	0	1	3	5
S_{1L}	240	280	320	400
S_{2G}	240	250	260	320
Z_{1L}	0	120	180	210
Z_{2G}	0		150	200
J_1	500	400	300	200

(b)

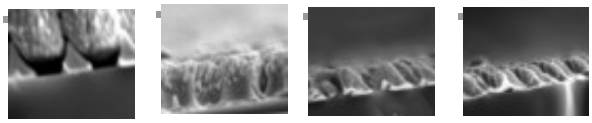

Figure S2. (a) S_{1L} indicates the length of the pyramid. S_{2G} indicates the height of the triangle cone. Z_{1L} indicates column length. Z_{2G} indicates column height. J_2 represents the column spacing of 40° sputtering. J is the distance from the surrounding nanocone to the central column. (b)Nanocone array gap distance.

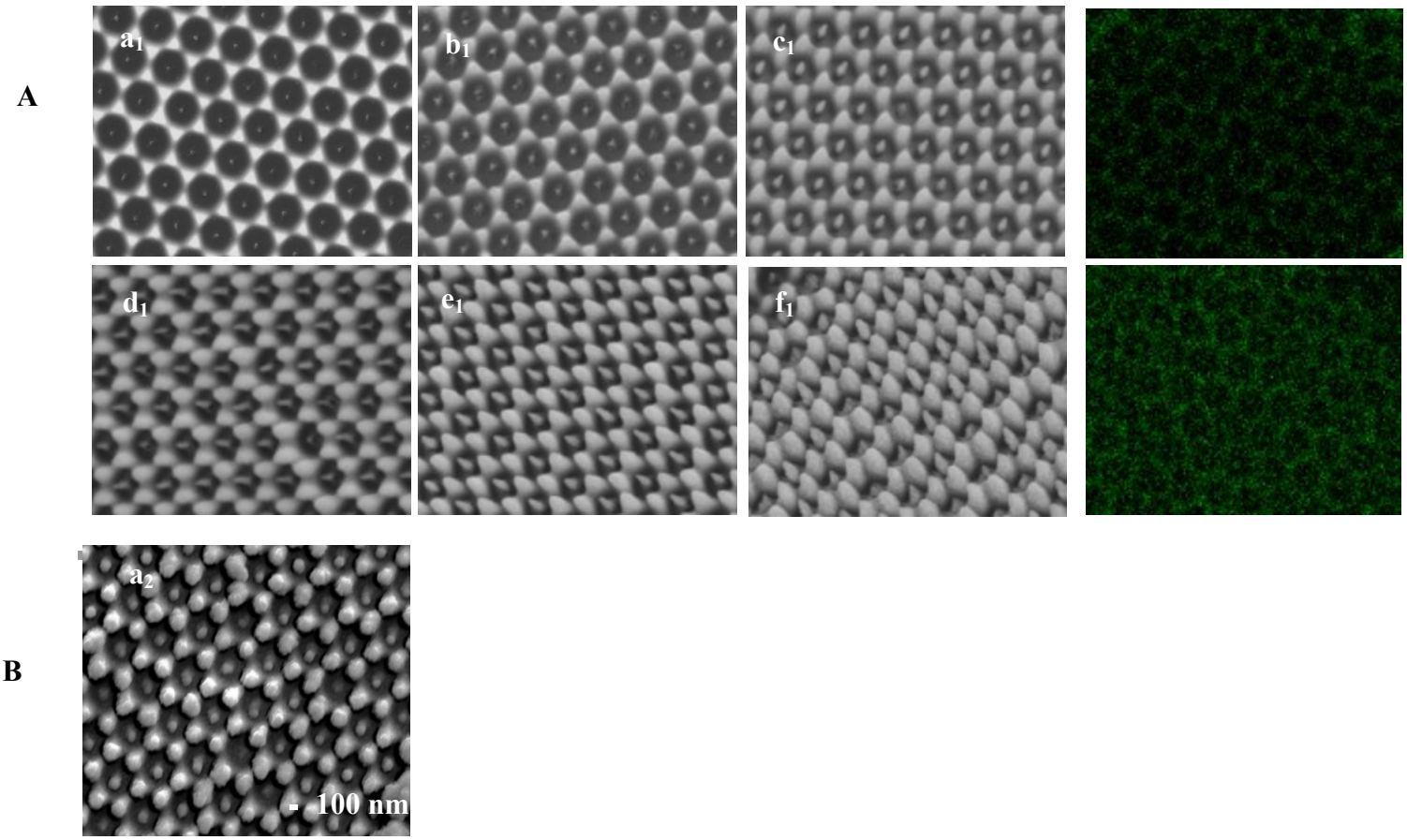

Figure S3. The Au nanocone arrays in groups A and B were tilted at 60° and 20°, respectively. a_1-f_1 is the structure diagram of gold nanocone sputtering with an inclination of 60° for 0-5 min. a_2 is the structure diagram of gold nanocone sputtering at an Angle of 20° for 2 min.

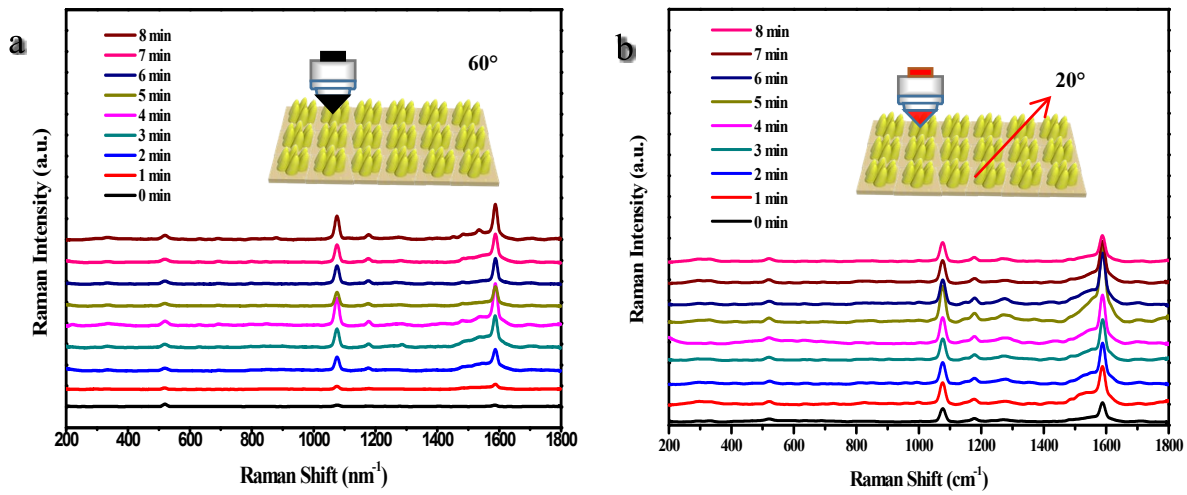

Figure S4. Raman spectra of the 60° and 20° tilted gold nanocone arrays (a and b), and the sputtering time is 1-8 min.

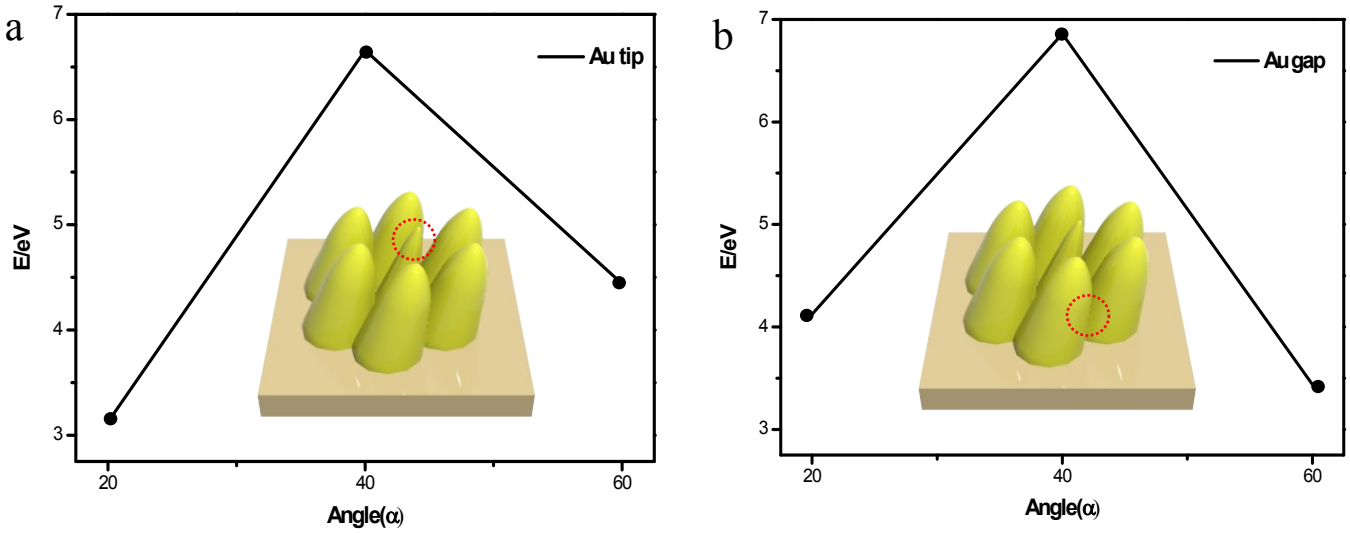

Figure S5. Mean electric field intensity for 20°，40°，60° gold nanocone array at the Au tip (a) and at the Au gap (b).

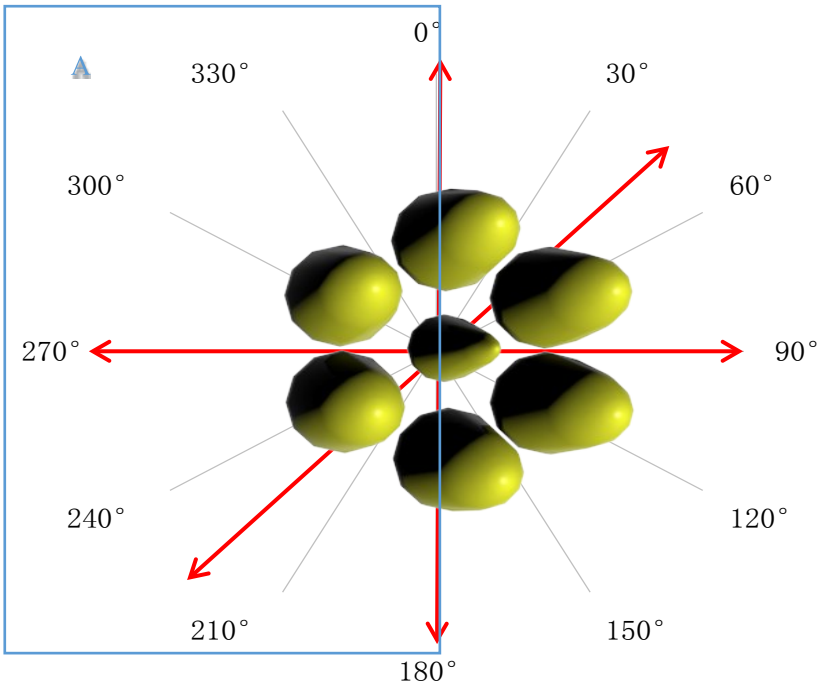

Figure S6. Electric field analysis diagram of Au nanocone array at 20°，40°，60°.