

## **Supplementary Materials:**

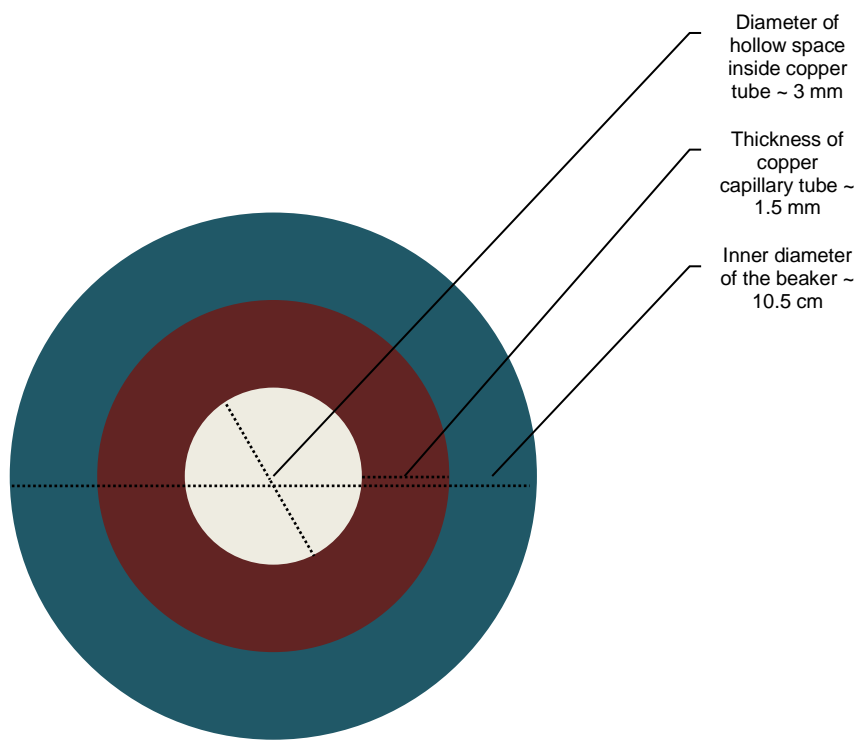
### **Predictor packing in developing unprecedented shaped colloidal particles**

**Mubarak Ali <sup>a,\*</sup>, I –Nan Lin <sup>b</sup> and C. –J. Yeh <sup>c</sup>**

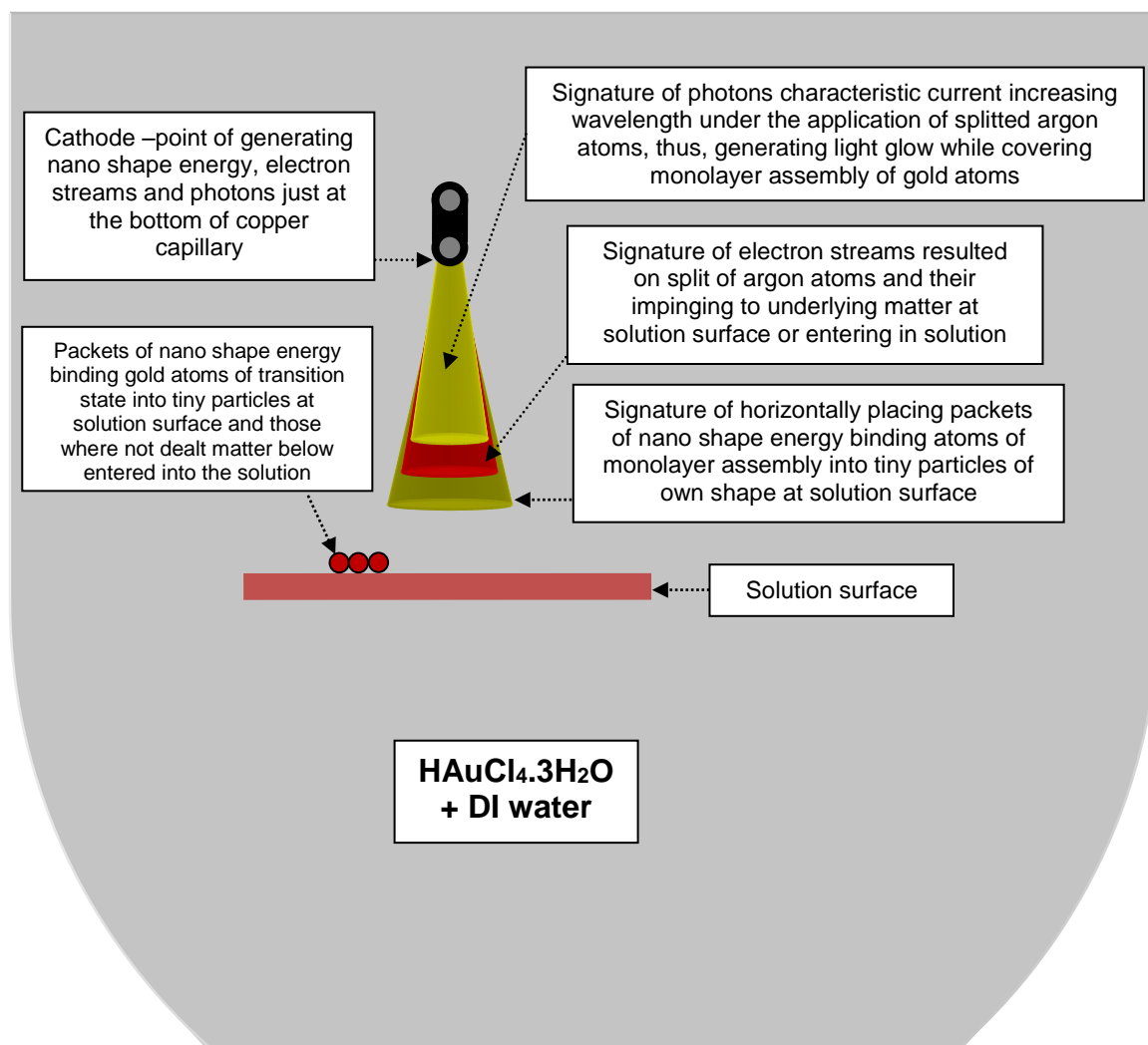
<sup>a</sup> Department of Physics, COMSATS Institute of Information Technology, Islamabad 45550, Pakistan, \* Email: [mubarak74@comsats.edu.pk](mailto:mubarak74@comsats.edu.pk), [mubarak74@mail.com](mailto:mubarak74@mail.com)

<sup>b</sup> Department of Physics, Tamkang University, Tamsui Dist., New Taipei City 25137, Taiwan (R.O.C.). e-mail: [inanlin@mail.tku.edu.tw](mailto:inanlin@mail.tku.edu.tw)

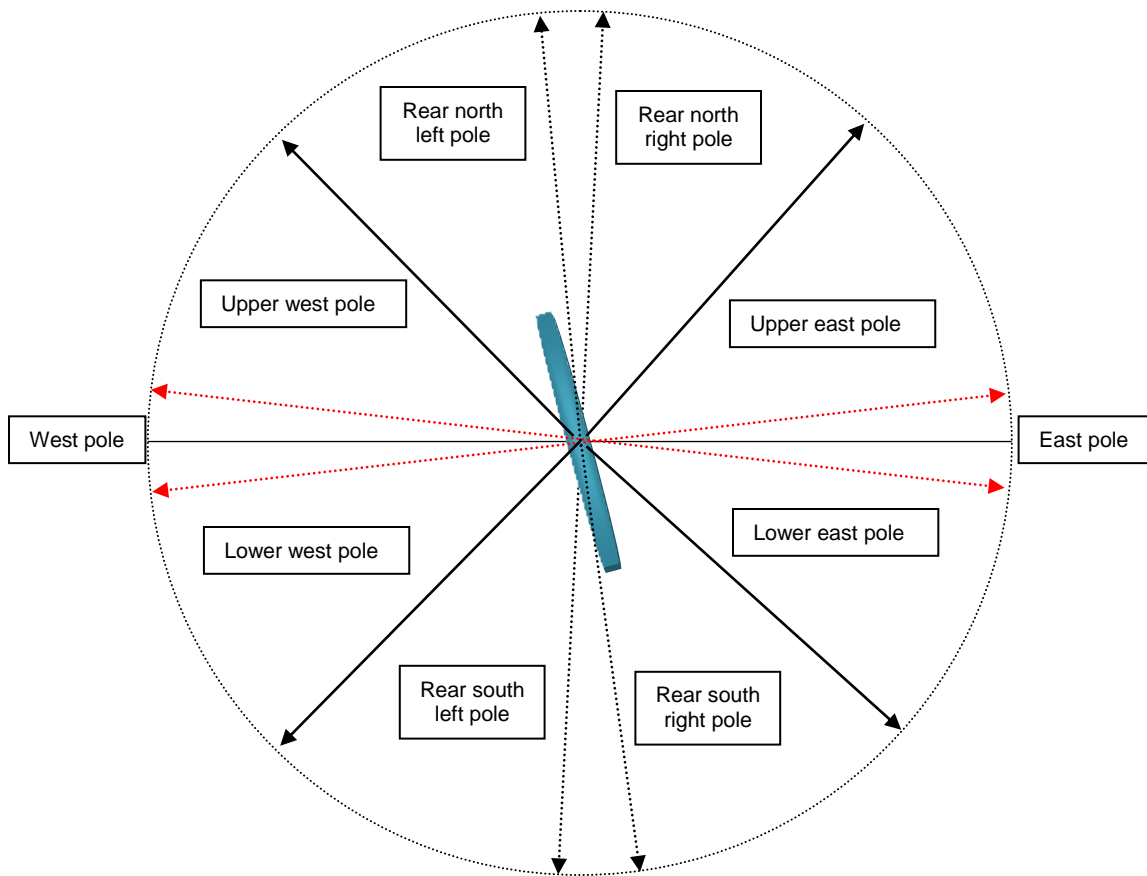
<sup>c</sup> Department of Engineering and system Science, National Tsing-Hua University, Hsinchu 30013, Taiwan (R.O.C.). e-mail: [arayray220@gmail.com](mailto:arayray220@gmail.com)



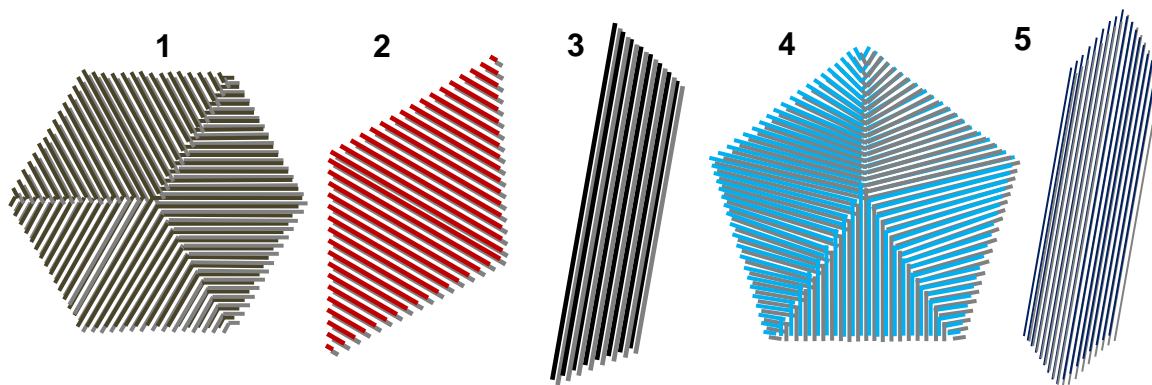
**Figure S1:** Internal diameter and thickness of copper capillary just placed over the solution surface (~ 4 mm above) in glass beaker having inner diameter 10.5 cm



**Figure S2:** Signatures of nano shape energy, impinging electron streams and light glow including photons of varying wavelengths dealing monolayer assembly of gold atoms at solution surface



**Figure S3:** Approximate distribution of surface format axes with respect opposite poles along with zero-force axis where along the rear north and south poles low degree angles packing of triangular-shaped tiny particles take place resulting into develop their rod-/bar-shaped particles



**Figure S4:** Different geometric anisotropic shaped particles developed under predictor packing of triangular-shaped tiny particles having structure of smooth elements on modifying their one-dimensional arrays of atoms; (1) hexagonal-, (2) rhombus-, (3) bar-, (4) pentagonal-, (5) rod-shaped particles