Supplementary Materials:

Predictor packing in developing unprecedented shaped colloidal particles

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**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.
Cathode – point of generating nano shape energy, electron streams and photons just at the bottom of copper capillary

Signature of photons characteristic current increasing wavelength under the application of splitted argon atoms, thus, generating light glow while covering monolayer assembly of gold atoms

Signature of electron streams resulted on split of argon atoms and their impinging to underlying matter at solution surface or entering in solution

Signature of horizontally placing packets of nano shape energy binding atoms of monolayer assembly into tiny particles of own shape at solution surface

Solution surface

Packets of nano shape energy binding gold atoms of transition state into tiny particles at solution surface and those where not dealt matter below entered into the solution

HAuCl₄·3H₂O + DI water

**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.