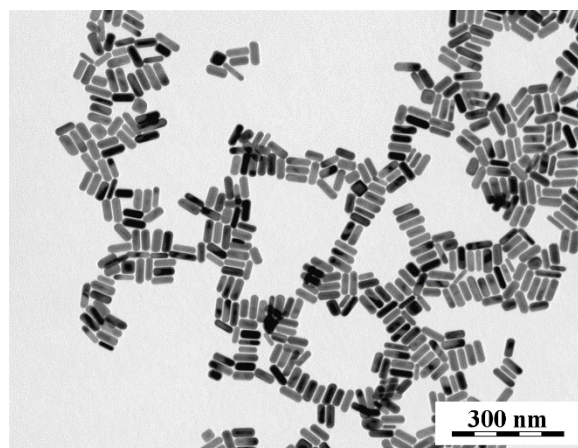
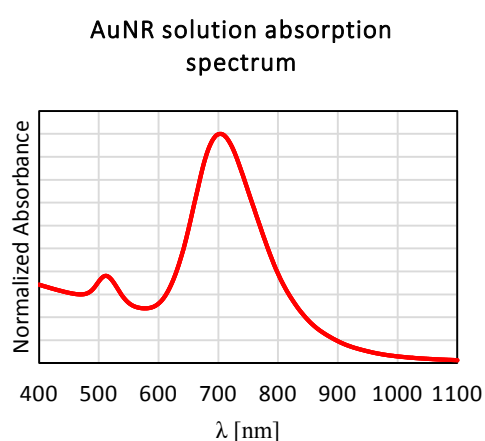


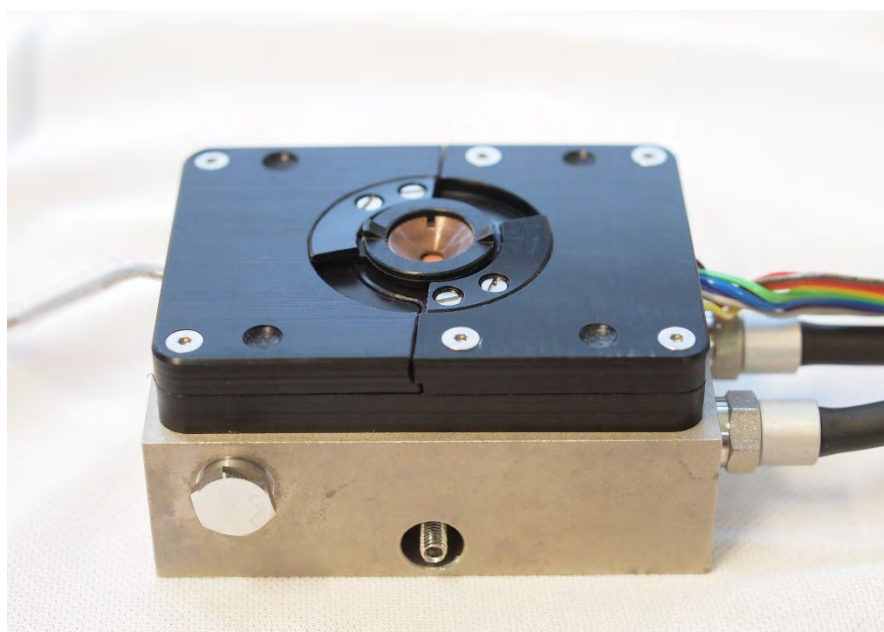
## Electronic supplementary information:

### *In-situ* WetSTEM observation of gold nanorods self-assembly dynamics in drying colloidal droplet

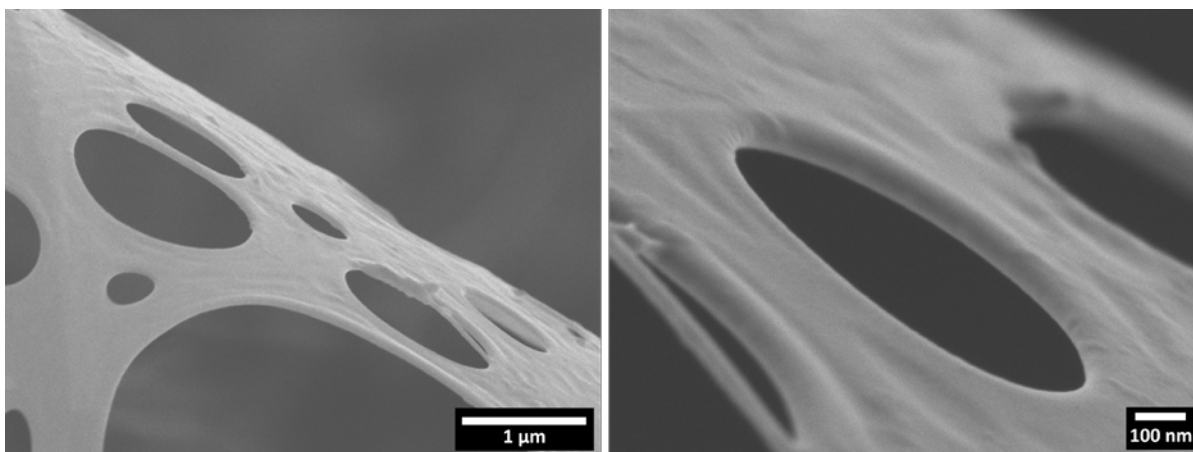
by Filip Novotný, Petr Wandrol, Jan Proška and Miroslav Šlouf



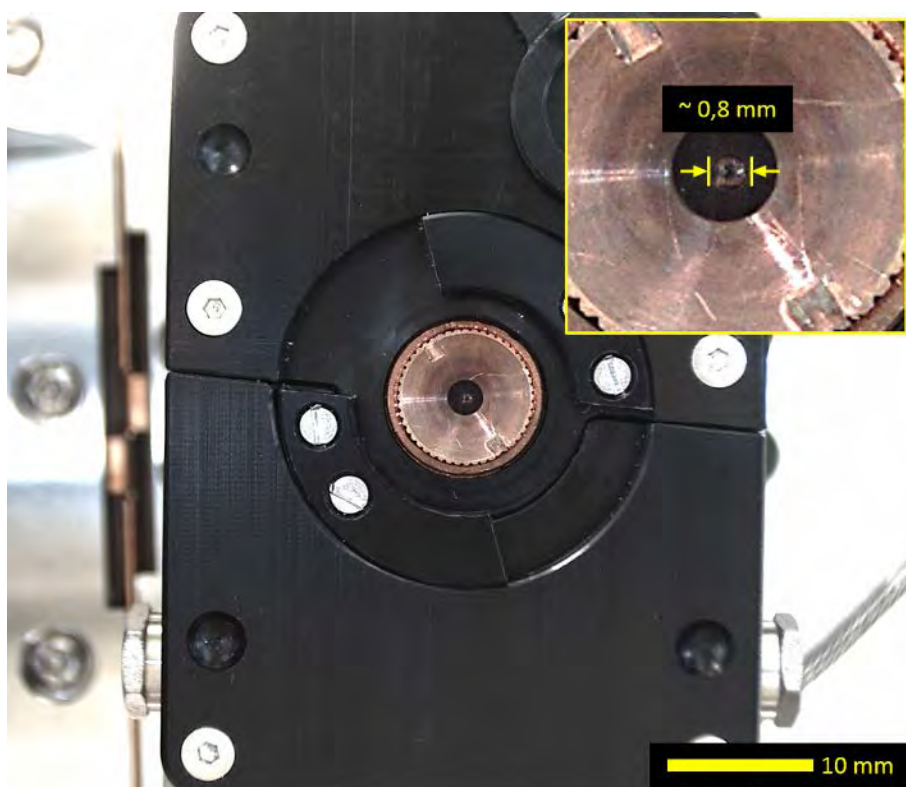
**Supplementary Figure S1:** – standard characterization of gold nanorod sample used for WetSTEM experiment. (left) UV-VIS absorption spectrum and (right) TEM micrograph. The mean particle dimensions were found to equal  $61.4 \pm 6.2$  nm in length and  $23.7 \pm 2.8$  nm in width. The aspect ratio was  $2.62 \pm 0.32$ .



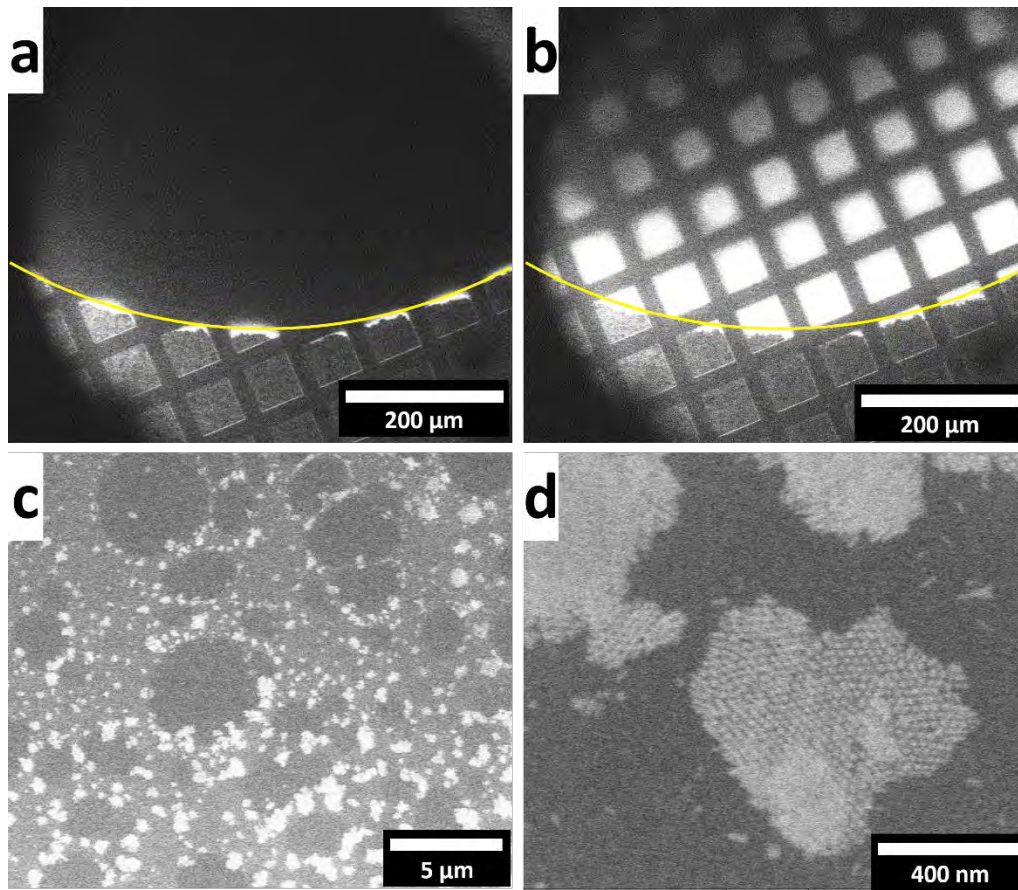
**Supplementary Figure S2:** Photopicture of the WetSTEM™ assembly.



**Supplementary Figure S3:** (left) FE-SEM image of the holey carbon used in the work. (right) Detail image of the holey carbon layer. The shape of the rim plays a significant role in the forming of the CTAB/water membrane.



**Supplementary Figure S4:** Top-down view on WetSTEM block with the detail of deposited drop of AuNR solution. Picture was taken during the ~2 minute long equilibration period, just before the experiment.



**Supplementary Figure S5:** Snapshots from overall progress of typical WetSTEM experiment. (a) Observing of the collapse of the deposited drop. (b) A forming of thin STEM transparent membrane within the footprint of the drop. (c) Zooming in the area of interest. (d) *In-situ* observation of self-assembly dynamics of AuNR in hydrated CTAB membrane.