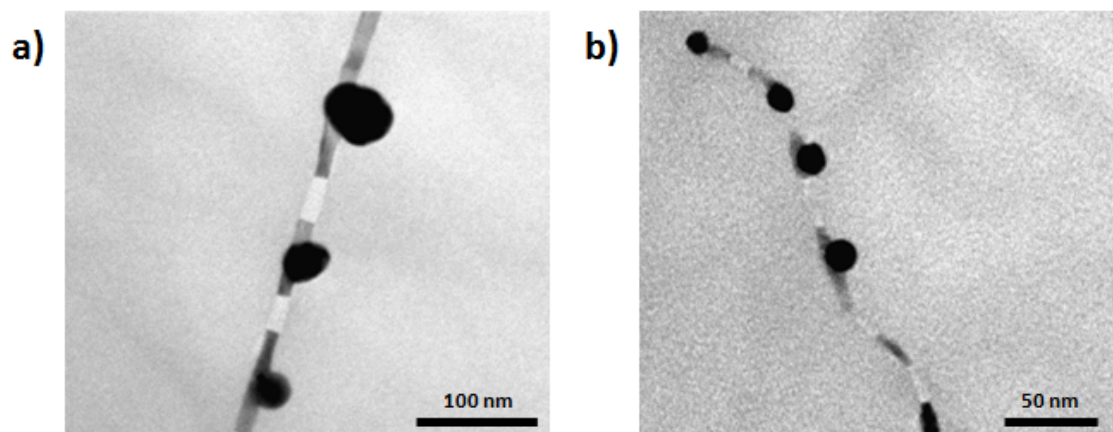


**Seamless Metallic Coating and Surface Adhesion of Self-Assembled Bio-Inspired Nanostructures Based on Di-(3,4-dihydroxy-L-phenylalanine) Peptide Motif**

*Galit Fichman<sup>†</sup>, Lihi Adler-Abramovich<sup>†</sup>, Suresh Manohar<sup>‡</sup>, Iris Mironi-Harpaz<sup>§</sup>,  
Tom Guterman<sup>†</sup>, Dror Seliktar<sup>§</sup>, Phillip B. Messersmith<sup>‡</sup>, and Ehud Gazit<sup>†,+,\*</sup>*

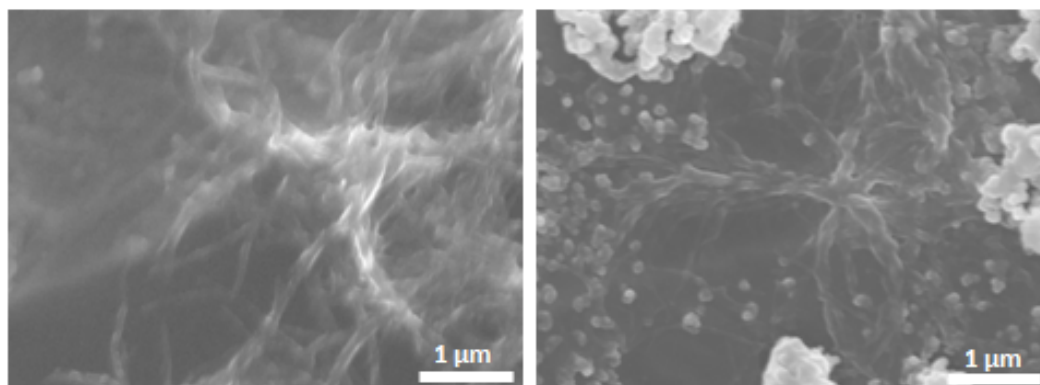
<sup>†</sup>Department of Molecular Microbiology and Biotechnology, George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv 6997801, Israel, <sup>‡</sup>Biomedical Engineering Department, Northwestern University, Evanston, Illinois 60208, USA, <sup>§</sup>Faculty of Biomedical Engineering, Technion - Israel Institute of Technology, Haifa 32000, Israel, and <sup>+</sup>Department of Materials Science and Engineering, Iby and Aladar Fleischman Faculty of Engineering, Tel Aviv University, Tel Aviv 6997801, Israel

## Supporting Information

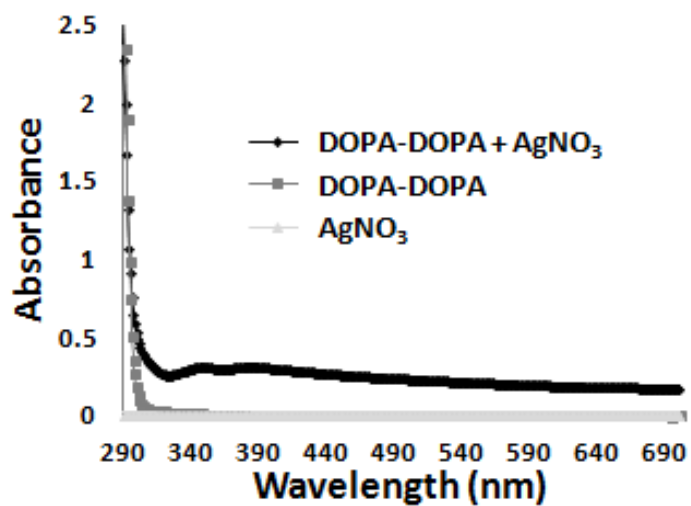


**Figure S1. Partial silver coating of the Fmoc-DOPA-DOPA assemblies.** TEM micrographs of 5 mg/mL peptide assemblies incubated for three days in the presence of 1.2mM  $\text{AgNO}_3$ .

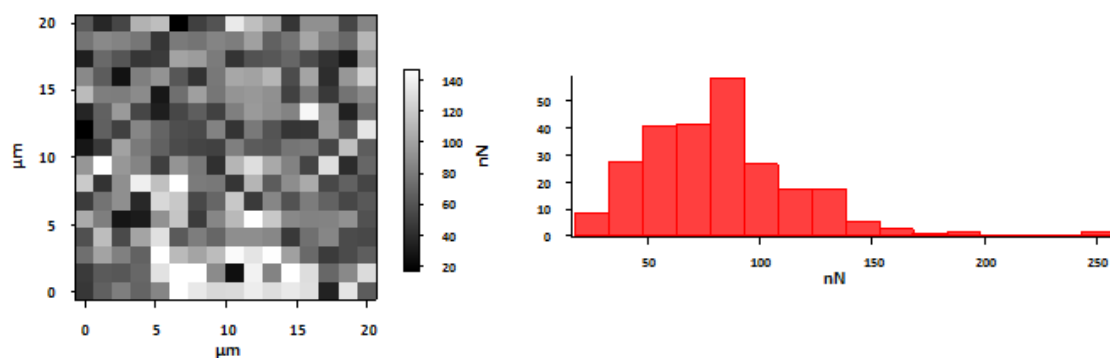
a)



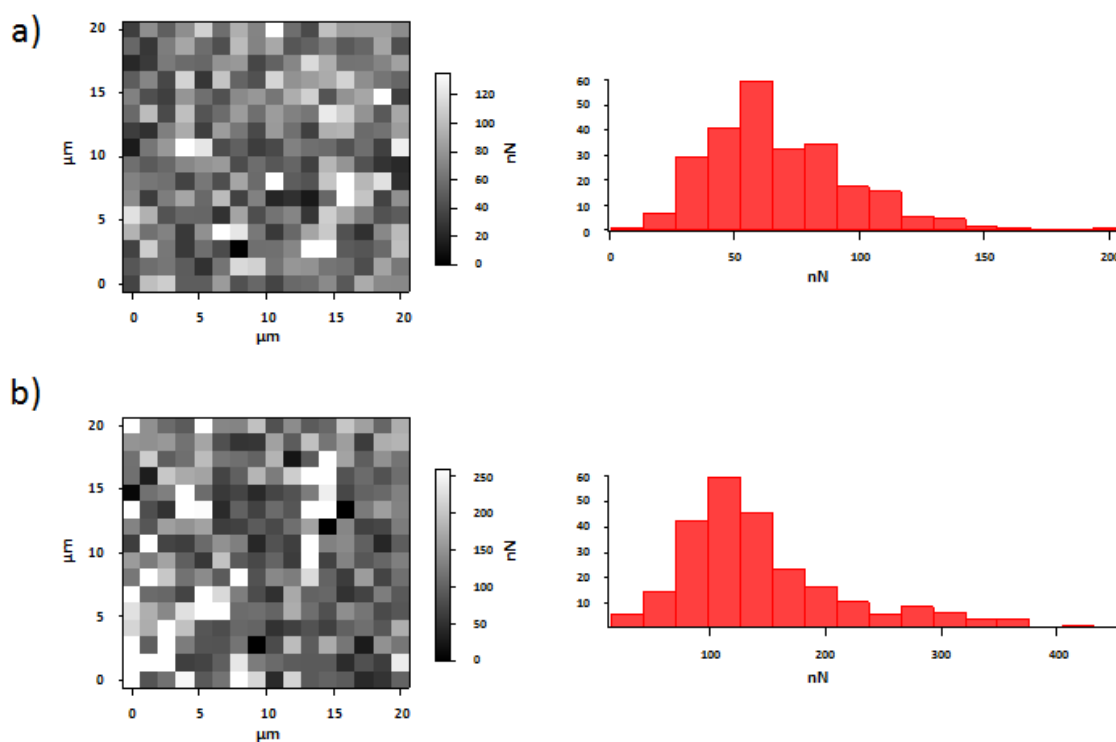
b)



**Figure S2. Silver reduction by DOPA-DOPA assemblies.** (a) HR-SEM micrographs of 5 mg/mL assembly-containing solution after one day of incubation with or without 0.1 M silver nitrate (right and left panels respectively). Following incubation with silver nitrate, the formation of silver nanoparticles were observed (right panel); (b) UV-vis spectra of 5 mg/mL assembly-containing solution collected after 30 min of incubation with 0.1 M silver nitrate. Samples were prepared in water adjusted to pH 7 by the addition of NaOH.



**Figure S3. Adhesion measurement of 17.2 mM Fmoc-DOPA-DOPA assemblies.** Adhesion force map and corresponding histogram of 17.2 mM Fmoc-DOPA-DOPA assemblies prepared in ethanol and water.



**Figure S4. Adhesion measurements of 12.9 mM Fmoc-DOPA-DOPA and 12.9 mM Fmoc-DOPA-DOPA-Lys assemblies.** (a) Adhesion force map and corresponding histogram of 12.9 mM Fmoc-DOPA-DOPA assemblies prepared in ethanol and water. (b) Adhesion force map and corresponding histogram of 12.9 mM Fmoc-DOPA-DOPA-Lys assemblies prepared in ethanol and water.