Supplementary Material (ESI) for Soft Matter

VISCOSITY AND INTERFACIAL PROPERTIES IN A MUSSEL-INSPIRED ADHESIVE COACERVATE

Dong Soo Hwang[a,†], Hongbo Zeng[b,d,†], Aasheesh Srivastava[a], Daniel V. Krogstad[a], Matthew Tirrell[a,b,e], Jacob N. Israelachvili[a,b] and J. Herbert Waite[c]

[a]*Materials Research Laboratory,* [b]*Department of Chemical Engineering,* [c]*Department of Molecular, Cell, and Developmental Biology, University of California, Santa Barbara, California 93106, USA*

[d]*Department of Chemical and Materials Engineering, University of Alberta, Edmonton, Alberta, T6G 2V4, Canada*

[e]*Departments of Bioengineering, Chemical Engineering and Materials Science & Engineering, Materials Science Division, Lawrence Berkeley Laboratory, University of California, Berkeley, CA 94720-1762, USA*

[†]D.S. Hwang and H. Zeng contributed equally to this work

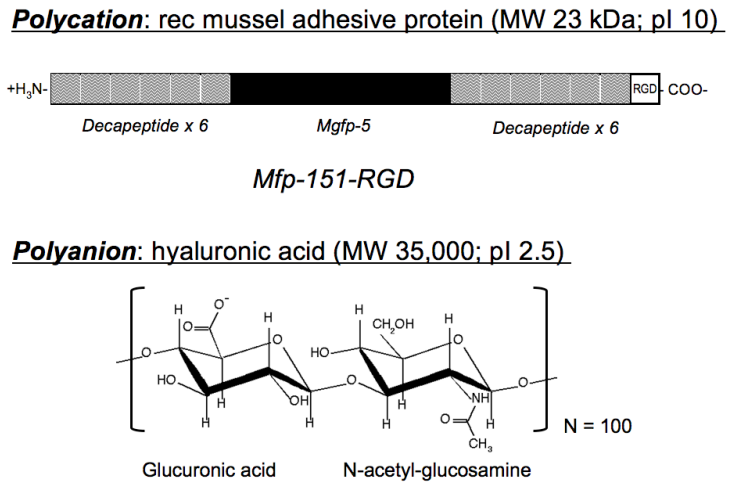

Figure S1. Polycationic and polyanionic macromolecules used for complex coacervation. The polycation (*above)* is a fusion protein consisting of two domains taken from mussel adhesive proteins in which the tandemly repeated decapeptide sequence AKPSYPPTYK (from mfp-1) is at the ends, whereas the Lys, Tyr, Gly-rich sequence of mfp-5 is in the core; the polyanion is hyaluronic acid (*below*).

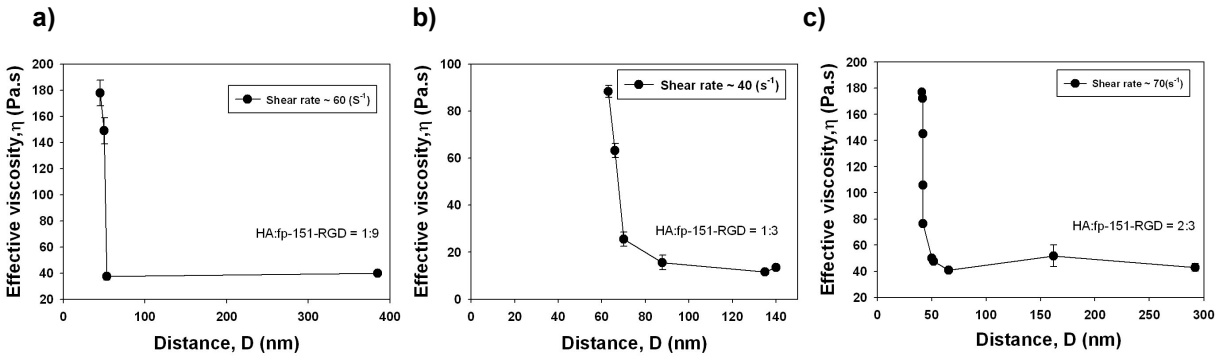

Figure S2. Viscosities of complex coacervate depending gap distance between two mica sheets, HA :fp-151-RGD ratio of (a) 1:9, (b) 1:3, (c) 2:3 (w/w)).

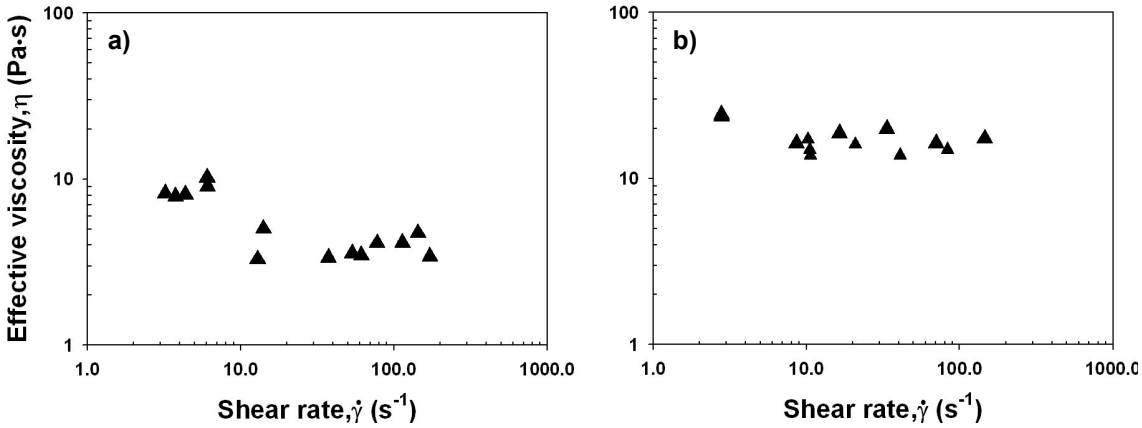

Figure S3. Viscosities of (a) HA and (b) fp-151-RGD depending on shear rate. Polyelectrolyte concentrations are both 100 mg/mL.