Supporting Information

Structure-activity-relationship studies to elucidate sources of antibacterial activity of modular polyacrylate microgels

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1. Experimental details

- **Lifetime of microgel activity**

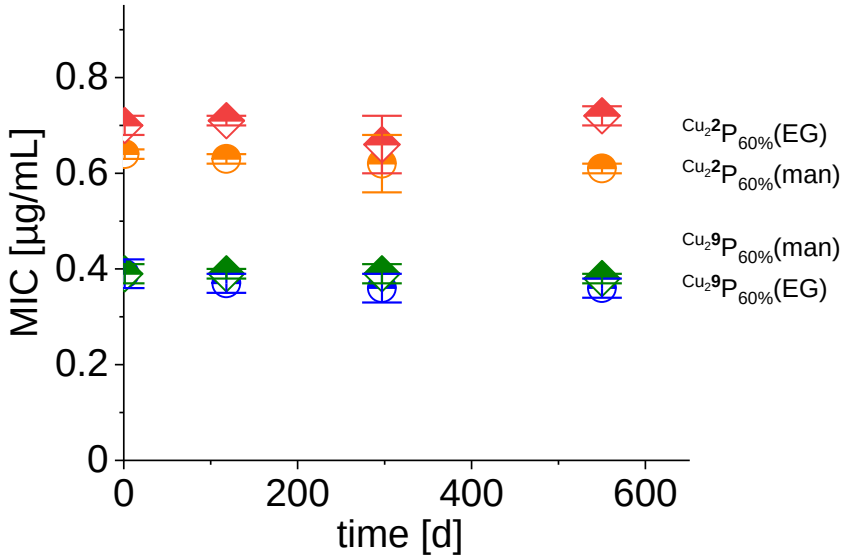

Figure S1, Minimal inhibitory concentration of aging microgels $^{Cu_2\mathbf{2}}P_{60\%}$(EG), $^{Cu_2\mathbf{2}}P_{60\%}$(Man), $^{Cu_2\mathbf{9}}P_{60\%}$(EG), and $^{Cu_2\mathbf{9}}P_{60\%}$(Man) over 18 months; **2** = VBbpdpo; **9** = VBbspdpo

2. Computational analyses

- **Computational analysis of 4-hydroxybutyl acrylate (8a) the gas and aqueous layer**

Energies and coordinates (Å)

In the gas phase:

Total Energy = -499.616840275 E_H

Dipole = 3.168609 D

Standard thermodynamic quantities at 298.180 K and 1.000 ATM:

This Molecule has 0 Imaginary Frequencies

Zero point vibrational energy:	116.857 kcal/mol
Total Enthalpy:	124.841 kcal/mol
Total Entropy:	109.657 cal/mol K

In water:

Total Energy = -499.632830131 E_H

Dipole = 4.181386 D

Coordinates (Å)

ATOM	X	Y	Z
C	0.232587	-3.531723	-1.269993
C	0.314540	-2.596731	-0.121348
O	0.556865	-2.909574	1.034052
O	0.083671	-1.329707	-0.515133
H	0.008077	-3.097941	-2.239863
O	-0.372016	4.532326	1.221233
C	0.427216	-4.843469	-1.107341
H	0.368462	-5.533443	-1.943582
H	0.650797	-5.257273	-0.127671
C	0.132450	-0.310169	0.515506
H	-1.407915	3.503518	-0.274791
H	0.587249	1.200625	-0.937457
H	-0.609207	-0.552604	1.283405
H	1.123374	-0.329230	0.980475
C	-0.156254	1.026199	-0.149108
H	-1.137942	0.976807	-0.637549
H	-0.873226	2.006186	1.651726
C	-0.130157	2.179487	0.861900
H	0.851353	2.230035	1.351903
H	0.326147	3.728035	-0.577419
C	-0.418520	3.525207	0.207902
H	-0.557552	5.383438	0.793154