

## Supporting Information

### Effect of nano-scale curvature on intrinsic blood coagulation system

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**Table S1.** Characterization of silica nanoparticles used in this study.

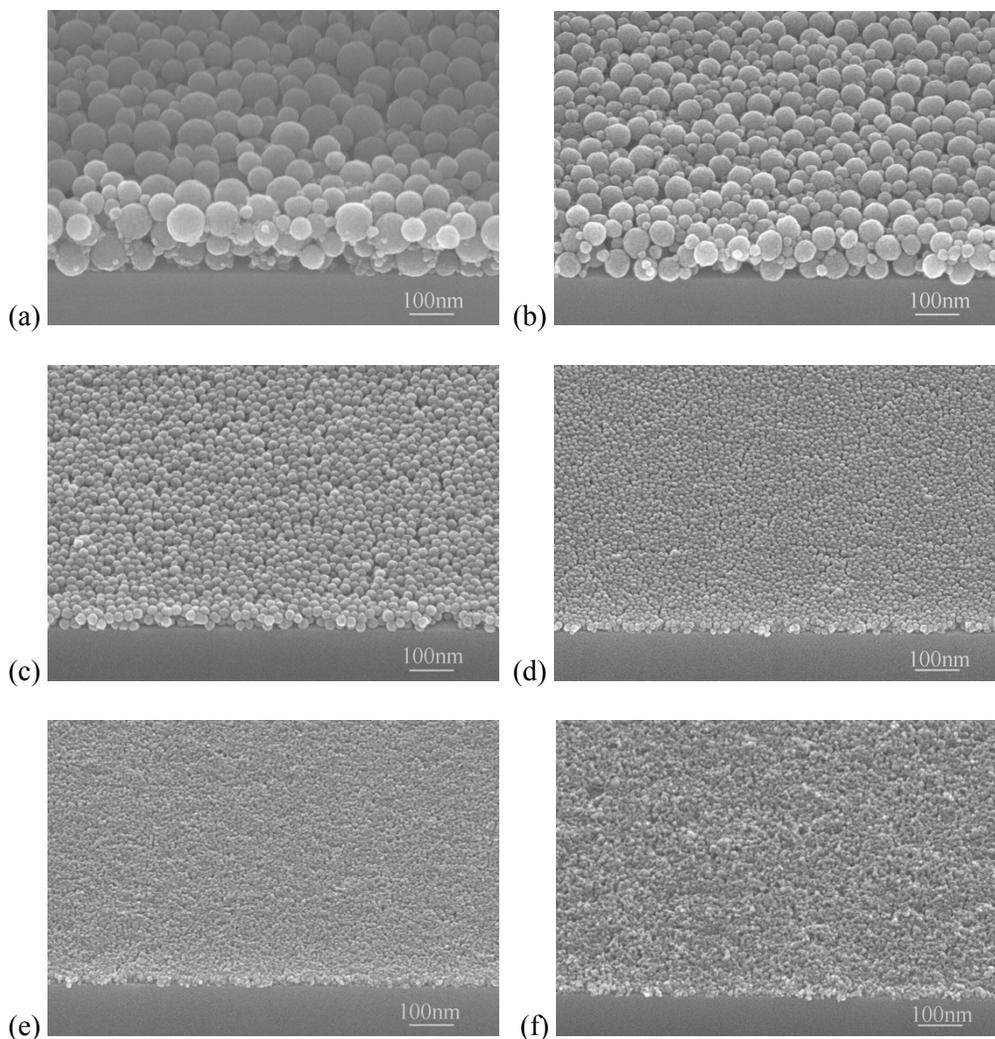
Diameter (nm) <sup>a</sup>	Brand (provider)	Surface area <sup>a</sup> (cm <sup>2</sup> /g)	Diameter by SEM <sup>b</sup> (nm)	Hydrodynamic Diameter (nm)	Zeta potential (mV)
4	AS (Alfa Aeser)	6.5 x 10 <sup>6</sup>	7 ± 1	14.3 ± 2.8	-42.0 ± 0.5
7	Ludox SM (Aldrich)	3.45 x 10 <sup>6</sup>	9 ± 2	8.1 ± 1.1	-33.8 ± 1.5
12	Ludox HS (Aldrich)	2.2 x 10 <sup>6</sup>	16 ± 2	10.1 ± 0.6	-41.7 ± 10.5
22	Ludox TM (Aldrich)	1.4 x 10 <sup>6</sup>	27 ± 3	17.7 ± 1.4	-43.3 ± 0.5
50	NexSil 85 (Nyacol)	0.55 x 10 <sup>6</sup>	68 ± 23	55.6 ± 2.1	-48.1 ± 0.9
85	NexSil 125 (Nyacol)	0.35 x 10 <sup>6</sup>	104 ± 33	80.9 ± 3.0	-41.2 ± 0.7

<sup>a</sup>provided by manufacturer; <sup>b</sup>see **Figure S1**

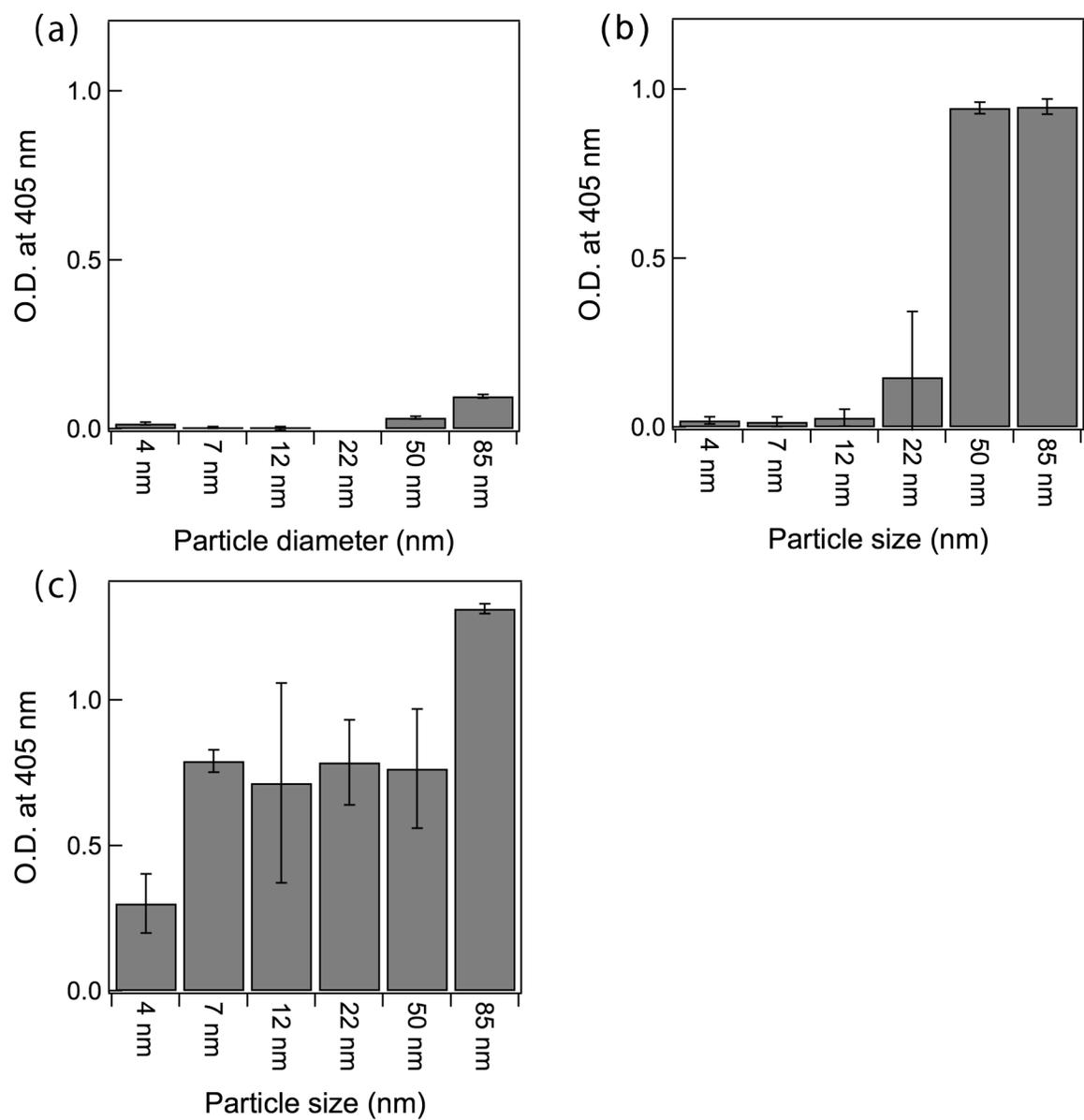
Dynamic light scattering (DLS) and Zeta potentials of silica NPs were measured using MALVERN Zetasizer Nano ZS in DI water. The measurements were repeated more than three times and the average values and standard deviations were listed in Table S1. AS provided by Alfa Aeser (4 nm particle) showed slight aggregation, however hydrodynamic diameter of other particles were in accordance with the provider's data.

### Scanning electron micrograph (SEM) of silica nanoparticles:

Silica NPs dispersions were casted on silicon wafer and SEM observations were performed by FESEM (S-5200, Hitachi High Technologies) at 5 kV after deposition of 0.5 nm thick platinum on the surface. Particles were randomly chosen from SEM images and the size was manually measured using FESEM accompanying software. Diameters by SEM are averages of the measurements (Table S1).



**Figure S1.** SEM images of silica nanoparticles with diameter of (a) 85nm, (b) 50 nm, (c) 22 nm, (d) 12 nm, (e) 7 nm, and (f) 4 nm.



**Figure S2.** Intrinsic coagulation activity after 3 hr incubation in the presence of silica NPs. Surface area of NPs were (a) 0.4 cm<sup>2</sup>, (b) 2 cm<sup>2</sup>, and (c) 10 cm<sup>2</sup> in 180  $\mu$ L of test solution. Error bars suggest standard deviations of more than 12 samples.