Silver nanoparticle protein corona composition compared across engineered particle properties and environmentally relevant reaction conditions

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Supplemental Tables and Figures

Table S1: List of NP protein corona and NP unbound proteins identified by LC-MS, including their calculated isoelectric point (pI), molecular weight (MW), enzyme commission number (EC number, where appropriate), GO description (including Biological process, cellular component and molecular function), as well as their relative abundance in the NP bound and unbound fractions indicated as average NSAF value and standard deviation in NSAF value as calculated from three biological replicates. Finally, enrichment factors (a ratio of average NSAF values from bound and unbound fractions) are provided for each identified proteins across all six samples.

Table S2: List of corona proteins identified across all six samples. Each protein is marked with one of three notations. An "X" indicates a protein corona protein in a given sample, while an "XX" indicates an enriched protein corona protein. A notation of "N/A" indicates a protein that is not identified as a corona protein within that specific sample. By sorting the list in Excel, one can identify ubiquitous proteins, or those shared across multiple sample conditions.

Table S3: Electrophoretic Mobility (EPM) for AgNPs under study conditions. Samples are labeled as follows: **[i.]** (-) 10 nm AgNPs in 10 mM NaPi at pH 7.4, **[ii.]** (+) 10 nm AgNPs in 10 mM NaPi at pH 7.4, **[iii.]** (-) 100 nm AgNPs in 10 mM NaPi at pH 7.4, **[iv.]** (-) 10 nm AgNPs in 10 mM NaPi at pH 7.4 with 0.1 mM cys, **[v.]** (-) 10 nm AgNPs in 10 mM NaPi at pH 7.4 with 0.8 mM NaCl, and **[vi.]** (-) 10 nm AgNPs in 10 mM NaPi at pH 7.4 with 3.0 mM NaCl. EPM units are (microns/second)/(volt/cm).

	i	ii	iii	iv	v	vi
AgNPs	-6.81	2.29	-4.83	-1.73	2.04	-11.13
AgNPs + YPE	-4.38	3.03	-4.68	-1.73	-3.37	-5.21

Figure S1: Classification and comparison of particle size-and amino acid- selective protein binding profiles. The NP corona proteins were classified according to their calculated **(A)** molecular weight (MW) and **(B)** their amino acid composition. The relative percentages for the different samples are indicated. Samples are labeled as follows: [i.] (-) 10 nm AgNPs in 10 mM NaPi at pH 7.4, [ii.] (+) 10 nm AgNPs in 10 mM NaPi at pH 7.4, [iii.] (-) 100 nm AgNPs in 10 mM NaPi at pH 7.4, [iv.] (-) 10 nm AgNPs in 10 mM NaPi at pH 7.4 with 0.1 mM cys, [v.] (-) 10 nm AgNPs in 10 mM NaPi at pH 7.4 with 0.8 mM NaCl, and [vi.] (-) 10 nm AgNPs in 10 mM NaPi at pH 7.4 with 3.0 mM NaCl.
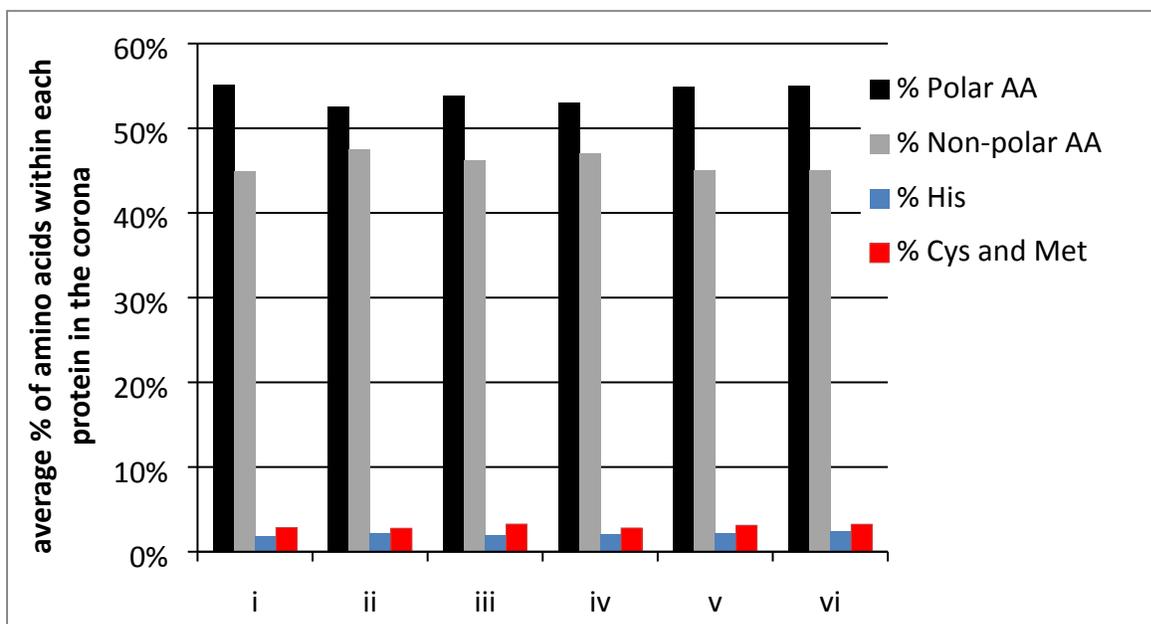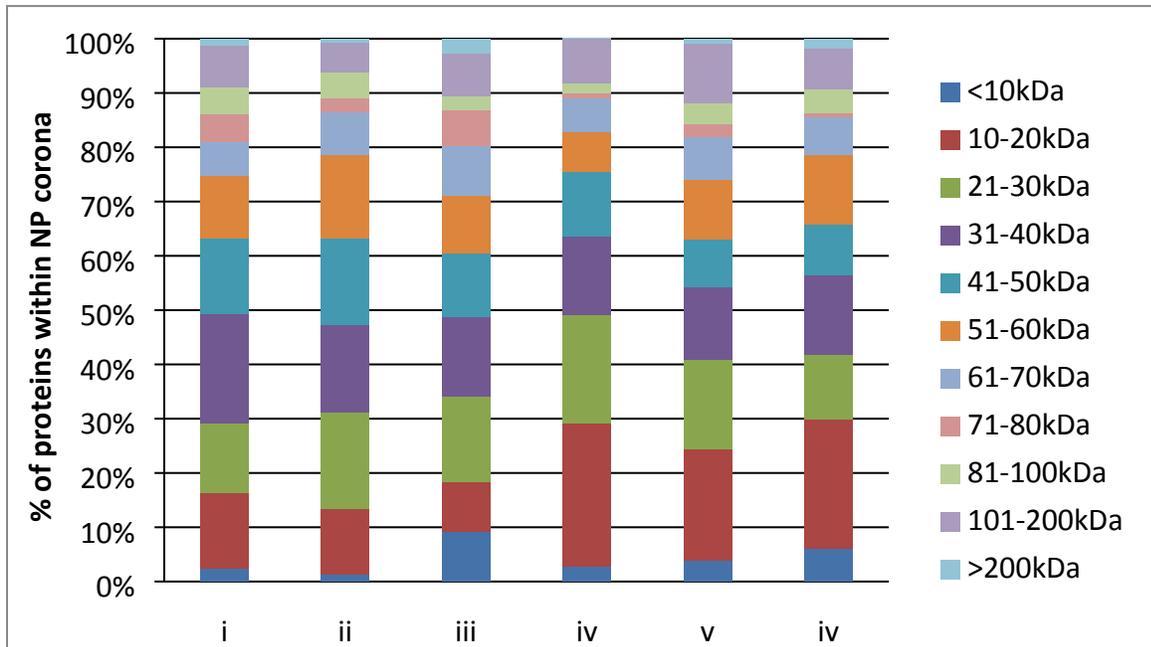
Figure S2: Comparison of enriched proteins within the NP corona of each sample. A profile of the enriched proteins within each of the six samples was analyzed. For a full list of enriched proteins within each NP protein corona, see Table S2.