

Supplementary Material

AF4-ICP-MS as a powerful tool for the separation of gold nanorods and nanospheres

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Table S1. AF4 gradients of cross flow evaluated.

	Time (min)	Regime	Cross flow (mL min⁻¹)
Program A			
Injection/Focussing	5	Injec. Flow 0.20 mL min ⁻¹	0.5
Elution cross flow	20	Linear decay	0.5 - 0
	20	Constant	0
Program B			
Injection/Focussing	5	Injec. Flow 0.20 mL min ⁻¹	0.5
Elution cross flow	6	Linear decay	0.5 - 0.25
	18	Linear decay	0.25 - 0
	16	Constant	0
Program C			
Injection/Focussing	5	Injec. Flow 0.20 mL min ⁻¹	0.5
Elution cross flow	20	Power (Exponent 1.5)	0.5 - 0
	20	Constant	0

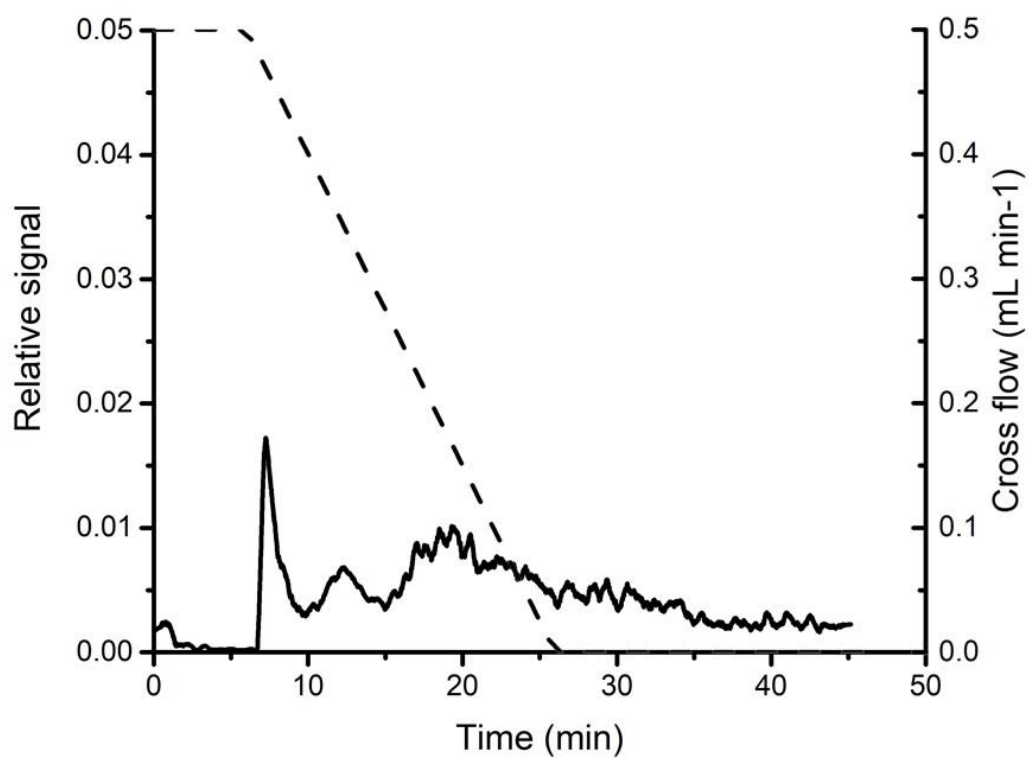


Figure S1. AF4-ICP-MS fractogram of a mixture containing commercially available 20 nm AuNSs (87 ng mL^{-1}) and 5.63 aspect ratio AuNRs (104 ng mL^{-1}) obtained with the cross flow program A (dash line). Carrier: 0.01 % SDS, 1 mM NaH_2PO_4 , 1 mM Na_2HPO_4 , pH 7.

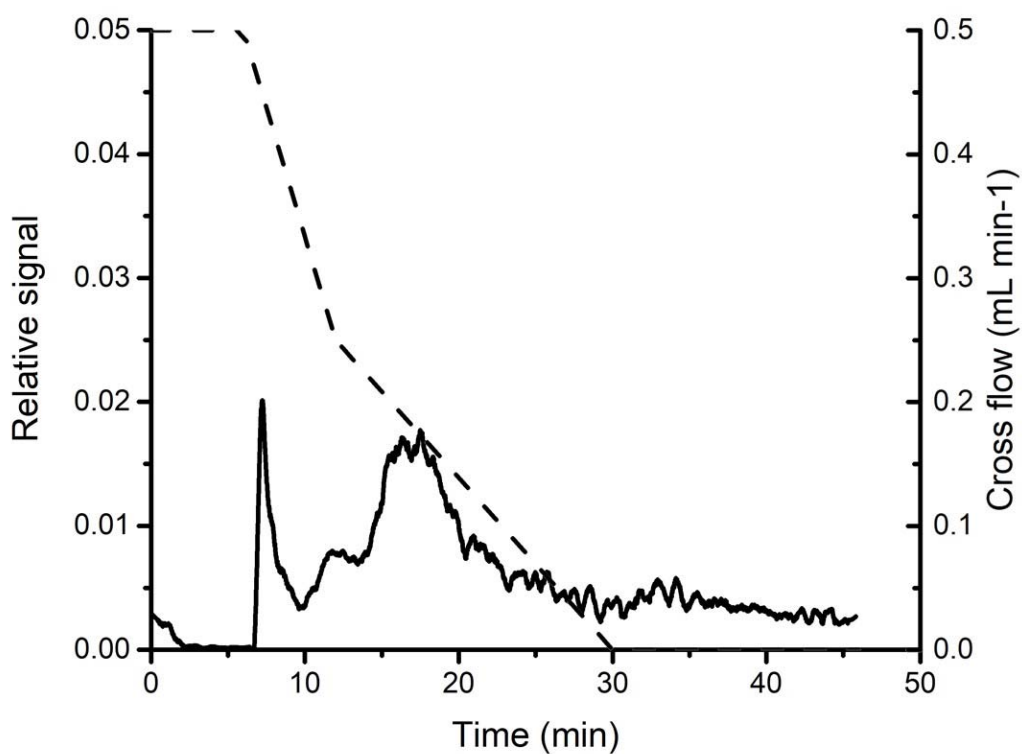


Figure S2. AF4-ICP-MS fractogram of a mixture containing commercially available 20 nm AuNSs (87 ng mL^{-1}) and 5.63 aspect ratio AuNRs (104 ng mL^{-1}) obtained with the cross flow program B (dash line). Carrier: 0.01 % SDS, 1 mM NaH_2PO_4 , 1 mM Na_2HPO_4 , pH 7.

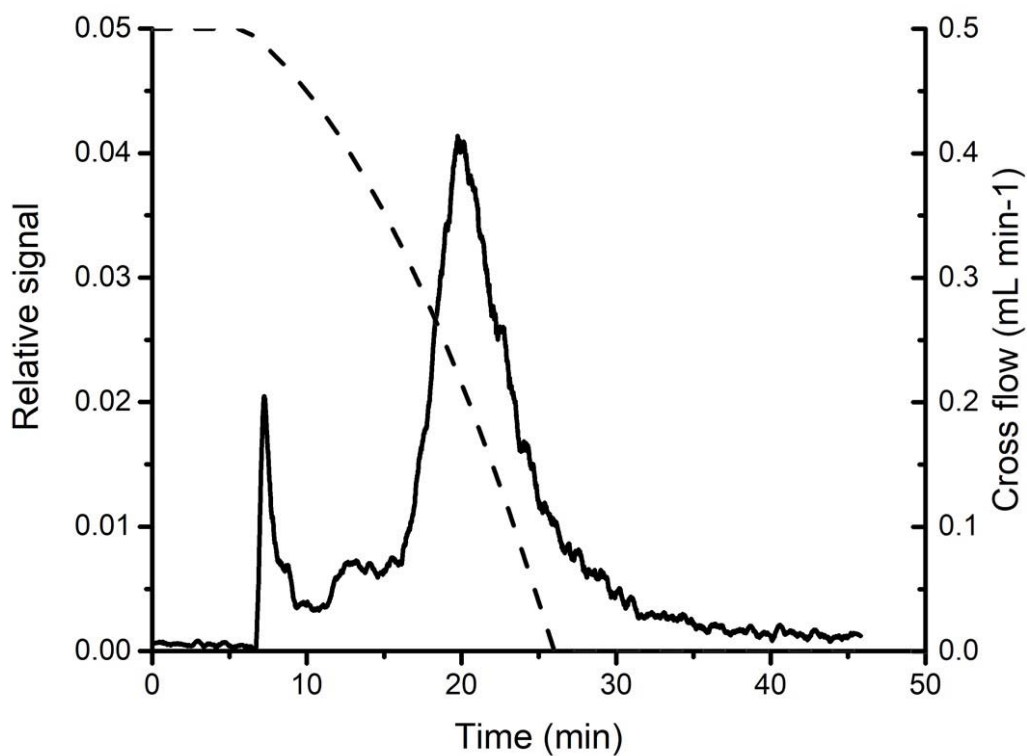


Figure S3. AF4-ICP-MS fractogram of a mixture containing commercially available 20 nm AuNSs (87 ng mL^{-1}) and 5.63 aspect ratio AuNRs (104 ng mL^{-1}) obtained with the cross flow program C (dash line). Carrier: 0.01 % SDS, 1 mM NaH_2PO_4 , 1 mM Na_2HPO_4 , pH 7.

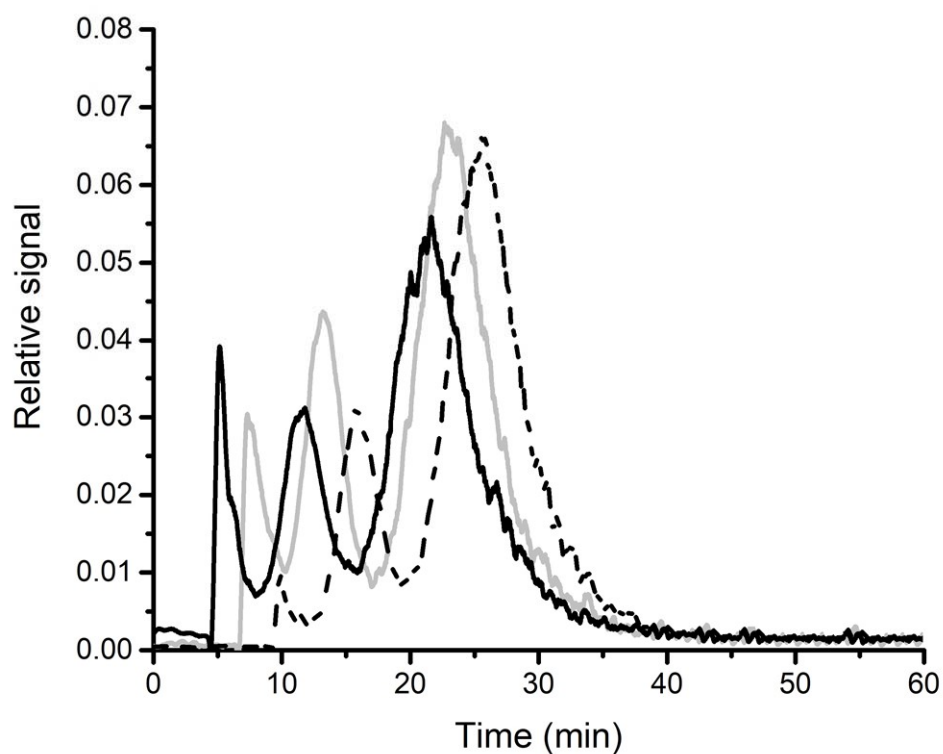


Figure S4. AF4-ICP-MS fractogram of a mixture containing commercially available 20 nm AuNSs (87 ng mL^{-1}) and 5.63 aspect ratio AuNRs (104 ng mL^{-1}) using three cross flow programs with different injection times: 2.5 min (black line), 5 min (grey line) and 7.5 min (dash line) modified from Table 1.

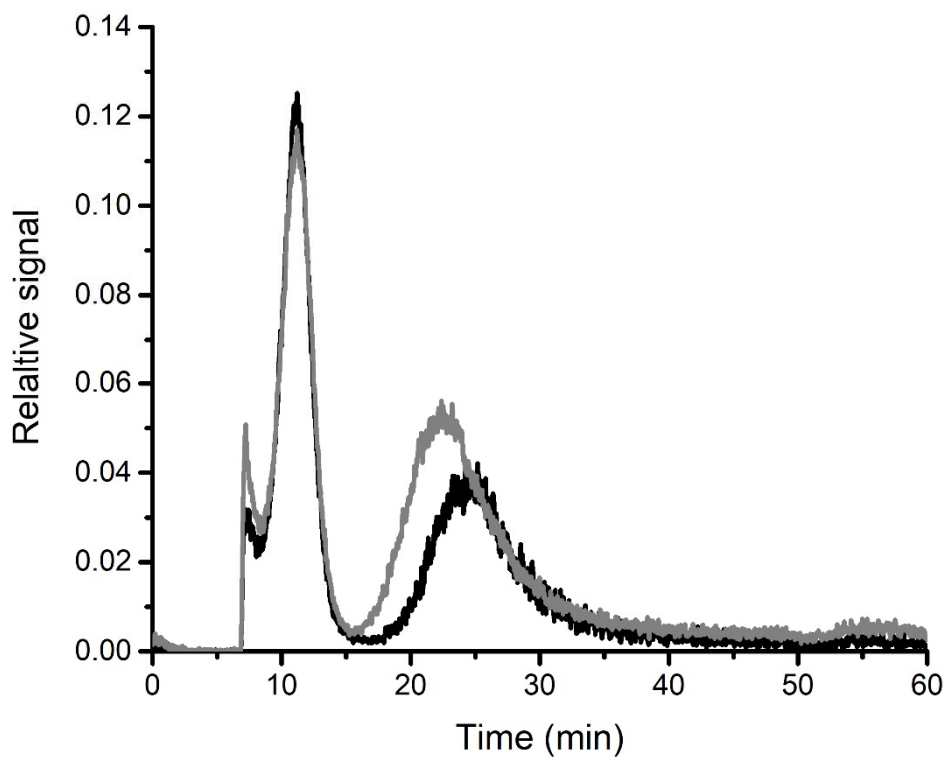


Figure S5. AF4-ICP-MS fractogram of a mixture containing commercially available 10 nm AuNSs (108 ng mL^{-1}) and 5.63 aspect ratio AuNRs (60 ng mL^{-1}) (black line) or 5.79 aspect ratio AuNRs (126 ng mL^{-1}) (grey line). Optimal cross flow program Table 1. Carrier: 0.01 % SDS, 1 mM NaH_2PO_4 , 1 mM Na_2HPO_4 , pH 7.