Method	Materials	Linear range	Limit of Detection	Reference
Fluorimetry	D-CDs	1-400 μM	0.14 μM	1
Fluorimetry	Au@MnO_2 NPs	0.5-17.5 μM	0.47 μM	2
Fluorimetry	RhB@MOFs	10-100 μM	2.54 μM	3
Fluorimetry	N-CDs	0.1-100 μM	0.072 μM	4
Fluorimetry	AI-FIL	1-1000 μM	0.3 μM	5
Fluorimetry	Fe-HOF	0.5-8 μM	0.14 μM	6
Fluorimetry	Ti_3C_2 QD	0-100 μM	0.19 μM	7
Electrochemistry	K-CKR	50-1620 μM	0.83 μM	8
Electrochemistry	Co_2P	0.1-4.5 mM	12.15 μM	9
Titration	DCPI	0.002-0.0012 mg/mL	0.0020 mg/mL	10
spectrophotometry	Cr (VI)	100 μM-100 mM	0.00154 mg/mL	11
Fluorimetry	N, S-GQDs/CoOOH	2-82 μM	0.048 μM	This work

Table S1 Comparison of different methods for the determination of AA.

Table S2 Fluorescence lifetime of N, S-GQDs, N, S-GQDs/CoOOH, and N, S-GQDs/CoOOH + AA

Samples	**τ_1 (ns)**	**τ_2 (ns)**	**B_1 (%)**	**B_2 (%)**	**Average τ (ns)**	**χ^2**
N, S-GQDs	2.64	10.58	23.33	76.67	8.72	1.076
N, S-GQDs/CoOOH	0.23	4.18	64.68	35.32	1.62	1.120
N, S-GQDs/CoOOH + AA	0.17	3.73	15.31	84.69	3.18	1.196