

Supporting Information

Metal-Organic Framework-Based Oxygen Carriers with Antioxidant Activity Resulting from the Incorporation of Gold Nanozymes

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KEYWORDS

Antioxidant activity, Blood substitutes, Gold Nanoparticles, Haemoglobin-based Oxygen Carriers, Metal-organic Frameworks, Nanozymes

Table S1. The formulation table for preparation of different nanoparticles (NPs) and nanocarriers (NCs).

Sample	HAuCl ₄ 5.88 mM (μ L)	NaBH ₄ 1 mg mL ⁻¹ (μ L)	PVP 3.27 mg mL ⁻¹ (μ L)	MQ (mL)	MOF 1 mg mL ⁻¹ (mL)	Hb 100 mg mL ⁻¹ (μ L)	Au: NaBH ₄ : PVP monomer (molar ratio)
Au-NP	100	200	NA	9.7	NA	NA	1:10:NA
Au/P5-NP	100	200	100	9.6	NA	NA	1:10:5
Au/P10-NP	100	200	200	9.5	NA	NA	1:10:10
MOF-NP	NA	NA	NA	NA	1	NA	NA
Au10@MOF-NC	10	20	20	8.95	1	NA	1:10:10
Au25@MOF-NC	25	50	50	8.875	1	NA	1:10:10
Au50@MOF-NC	50	100	100	8.75	1	NA	1:10:10
Au100@MOF-NC	100	200	200	8.5	1	NA	1:10:10
MOF ^{Hb} -NP	NA	NA	NA	NA	1	20	NA
Au10@MOF ^{Hb} -NC	10	20	20	8.95	1	20	1:10:10
Au25@MOF ^{Hb} -NC	25	50	50	8.875	1	20	1:10:10
Au50@MOF ^{Hb} -NC	50	100	100	8.75	1	20	1:10:10
Au100@MOF ^{Hb} -NC	100	200	200	8.5	1	20	1:10:10

Table S2. The ratios of NPs to cells used in the cell viability study.

Concentration ($\mu\text{g mL}^{-1}$)	Ratios of NPs:cells	
	RAW 264.7	HUVEC
5	17:1	34:1
12.5	43:1	86:1
25	86:1	172:1
50	172:1	345:1
125	431:1	862:1

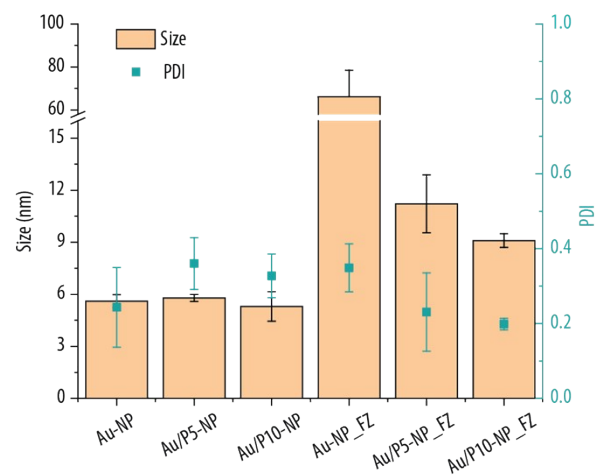


Figure S1. Size and polydispersity index (PDI) of the different suspensions of gold (Au) nanoparticles (NPs) when freshly prepared and re-suspended after freeze-drying (FZ).