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Electronic Supplementary Material

Chelator free gallium-68 radiolabelling of silica coated iron oxide nanorods: evaluation as multimodal PET/MR liver imaging agents

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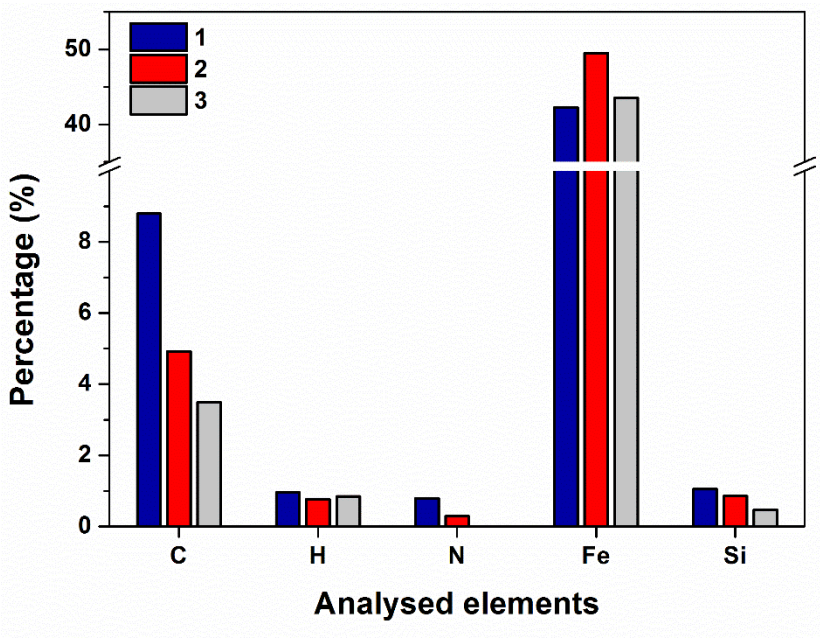

Figure S1. Elemental analysis of **1**-**3** by a combination of combustion analysis and ICP-OES.

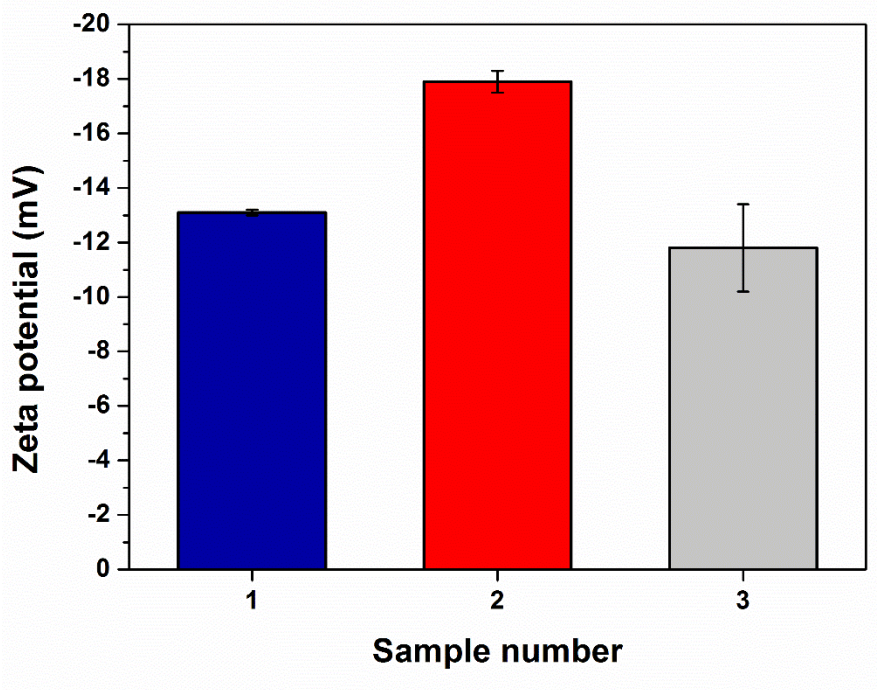

Figure S2. Zeta potential surface charge of **1**-**3**.

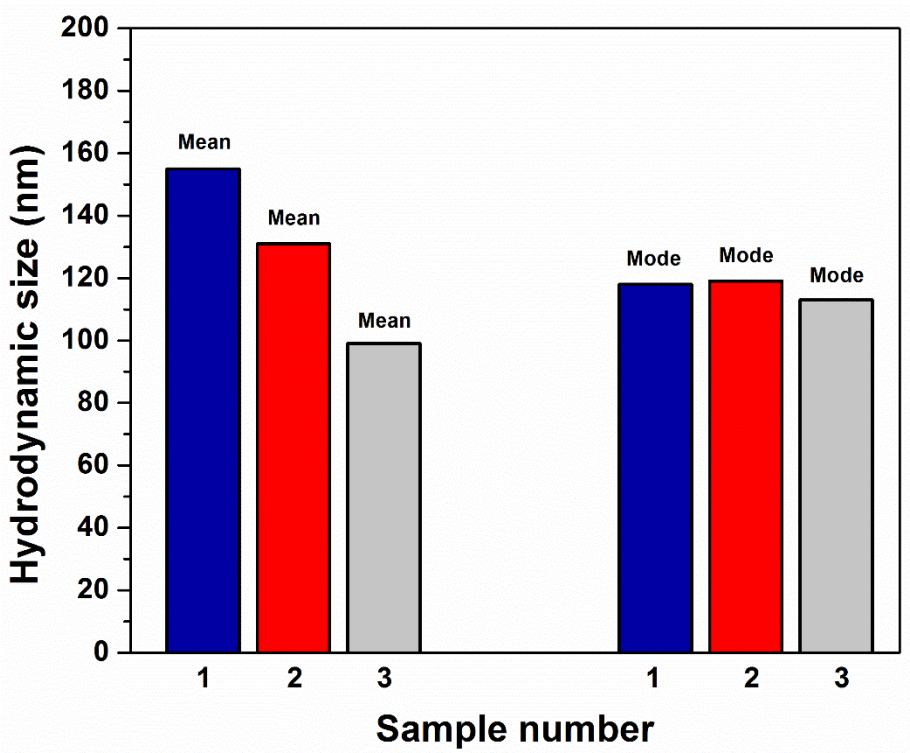

Figure S3. Mean and modal hydrodynamic sizes of **1**-**3** via nanoparticle tracking analysis (NTA).

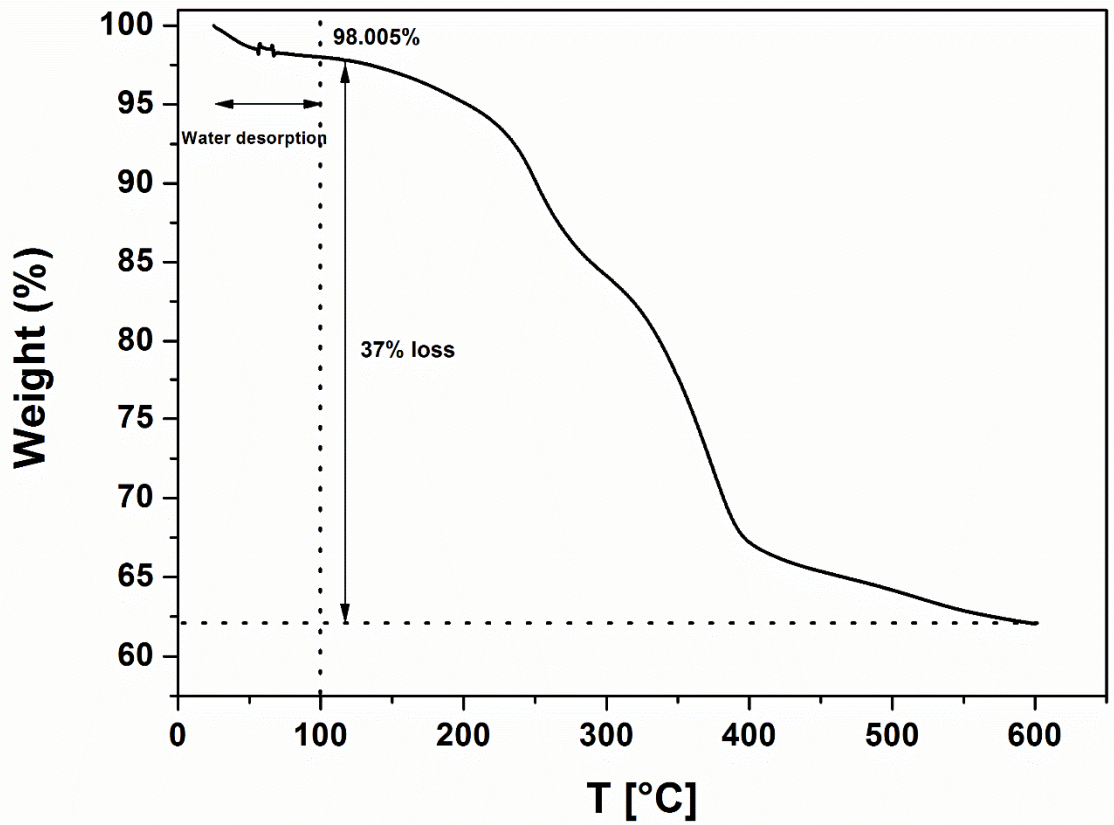

Figure S4. TGA analysis of **3** showing 37% weight loss which correlates to 5.62 ligands per nm^2 of iron oxide, calculated via a modified equation to take in to account of the nanorod geometry (Y. B. Sun, X. B. Ding, Z. H. Zheng, X. Cheng, X. H. Hu and Y. X. Peng, *Chem. Commun.*, 2006, DOI: 10.1039/b604202c, 2765).

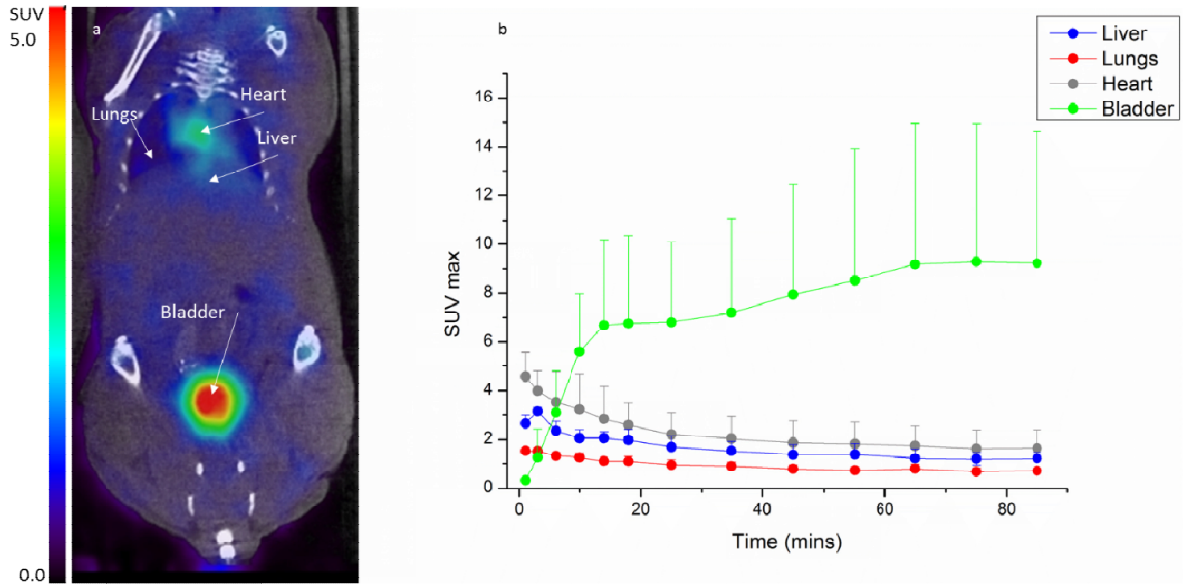

Figure S5. *In vivo* PET/CT image of ^{68}Ga-citrate (10 MBq), (a) maximum intensity projection at 80-90 minutes post-injection and (b) Time-activity-curves for major organs.

Figure S6. *In vivo* T_1 weighted image of 10 MBq/50 μg Fe of ^{68}Ga-**3** at 90 mins post-injection.

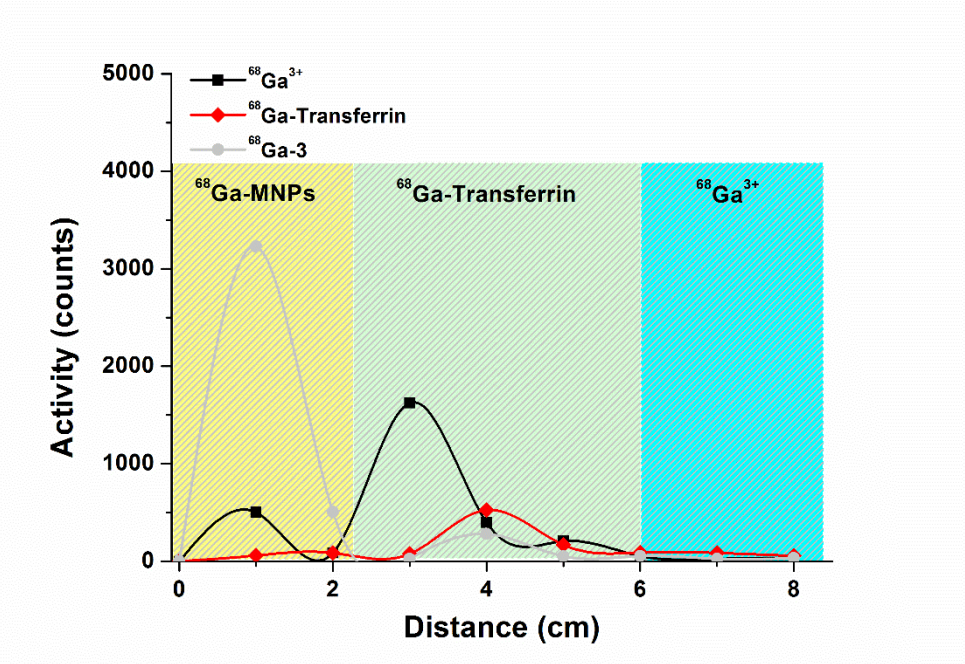

Figure S7. Identification of radioactivity in liver extracts post-scanning, identified via radio-TLC.