Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B. This journal is © The Royal Society of Chemistry 2020

SUPPORTING INFORMATION

Naphthalimide – Gold based Nanocomposite for the Ratiometric Detection of Okadaic Acid in Shellfish

Meenakshi Verma,^{1†} Monika Chaudhary,^{2†} Amanpreet Singh,³ Navneet Kaur,^{4*} Narinder Singh^{5*}

¹Department of UCRD, Chandigarh University, Ghraun, Mohali, - 140413, India

²Centre for Biomedical Engineering, Indian Institute of Technology Ropar, Roopnagar, Punjab-140001, India

³Department of Chemistry, Indian Institute of Technology Ropar, Roopnagar, Punjab-140001, India

⁴Department of Chemistry, Panjab University, Chandigarh – 160014, India.

[†]Equal Contribution.

Table of Contents:

Figure S1: ¹H NMR of compound 5

Figure S2: ¹³C NMR of compound 5

Figure S3: Mass spectra of compound 5

Figure S4: ¹H NMR of compound 3

Figure S5: ¹³C NMR of compound 3

Figure S6: Mass spectra of compound 3

Figure S7: ¹H NMR of compound 1

Figure S8: ¹³C NMR of compound 1

Figure S9: Mass spectra of compound 1

Figure S10: Florescence titrations of ONPs on addition of OA (λ_{max} = 450 nm)

Figure S11: EDAX analysis of ONPs

Figure S12: Florescence titrations of ONPs@Au on addition of OA (λ_{max} = 530 nm)

Figure S13: EDAX analysis of ONPs@Au

Figure S14. UV-Vis absorption titrations of ONPs on addition of OA

Figure S15. UV-Vis absorption spectra of ONPs, ONPs@Au and composite

Figure S16. UV-Vis absorption titrations of ONPs@Au on addition of OA

Figure S17. Competitive binding studies of composite containing OA towards various metal ions

Figure S18. Jobs plot for the determination of stoichiometry: okadaic acid with composite in aqueous medium

Figure S19. Polarity effect on the detection of the Okadaic acid

Figure S20. MTT assay of cell viability; percentage of Hela cell after incubation for 24 hours with the fabricated composite and composite upon binding with Okadaic acid.



Figure S1. ¹H NMR of compound 5



Figure S2. ¹³C NMR of compound 5



Figure S3. Mass spectra of compound 5



Figure S4. ¹H NMR of compound 3



Figure S5. ¹³C NMR of compound 3



Figure S6. Mass spectra of compound 3











Figure S9. Mass spectra of compound 1



Figure S10. Florescence titrations of ONPs on addition of OA (λ_{ex} = 450 nm)



Figure S11. EDAX analysis of ONPs



Figure S12. Florescence titrations of ONPs@Au on addition of OA (λ_{ex} = 530 nm)



Figure S13. EDAX analysis of ONPs@Au



Figure S14. UV-Vis absorption titrations of ONPs on addition of OA



Figure S15. UV-Vis absorption spectra of ONPs, ONPs@Au and composite



Figure S16. UV-Vis absorption titrations of ONPs@Au on addition of OA



Figure S17. Competitive binding studies of composite containing OA towards various metal

ions



Figure S18. Jobs plot for the determination of stoichiometry: okadaic acid with composite in aqueous medium.



Figure S19. Polarity effect on the detection of the Okadaic acid.



Figure S20. MTT assay of cell viability; percentage of Hela cell after incubation for 24 hours with the fabricated composite and composite upon binding with Okadaic acid.