

## **Gold nanorods decorated with a cancer drug for multimodal imaging and therapy**

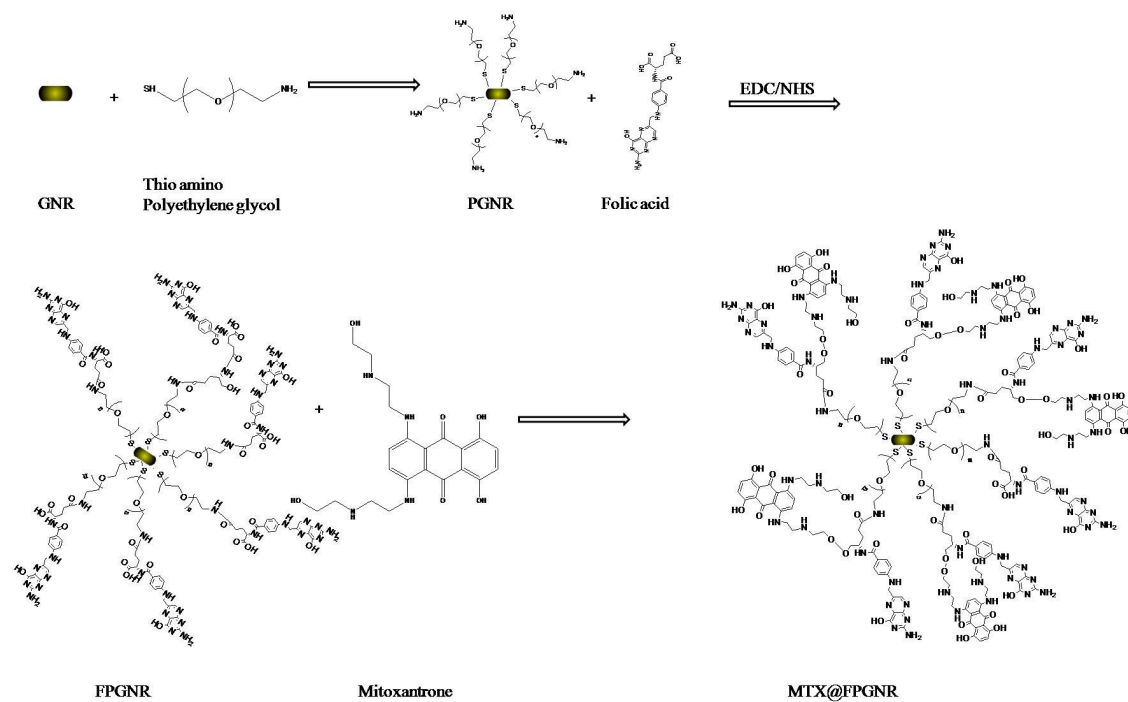
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Electronic Supplementary Information (ESI) available: [details of any supplementary information available should be included here]. See DOI: 10.1039/x0xx00000x



Scheme S1: Schematic on the synthesis of MTX@FPGNR at different stages

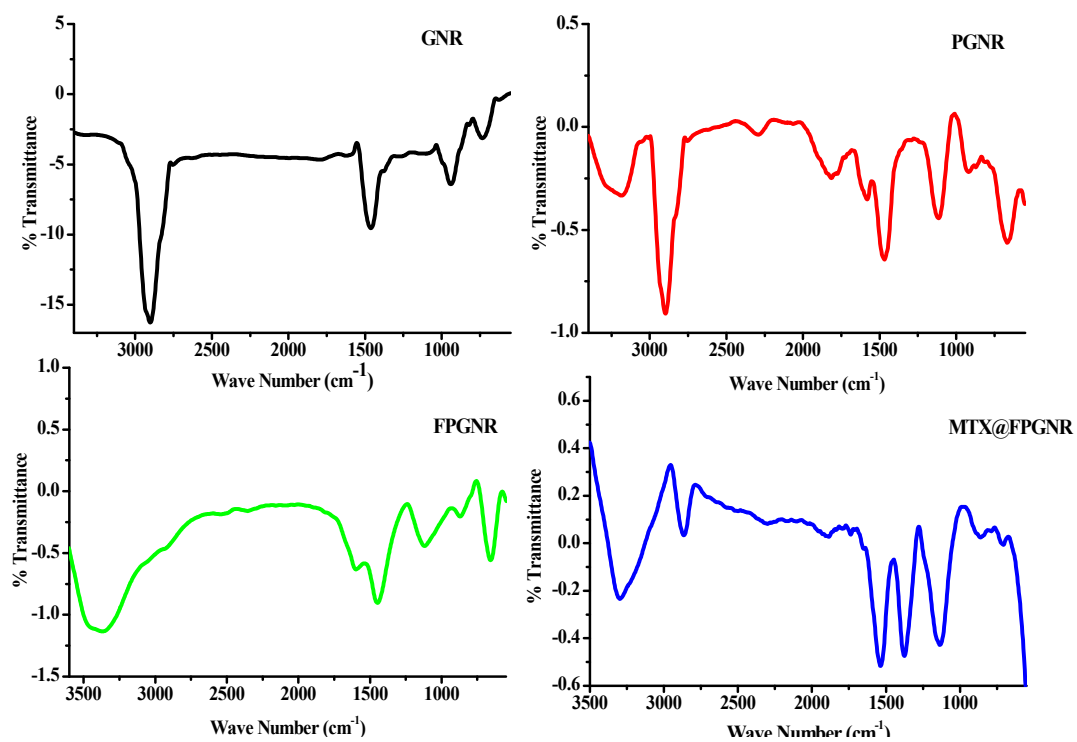


Fig S1: FTIR Spectrum of GNR, PGNR, FPGNR and MTX@FPGNR

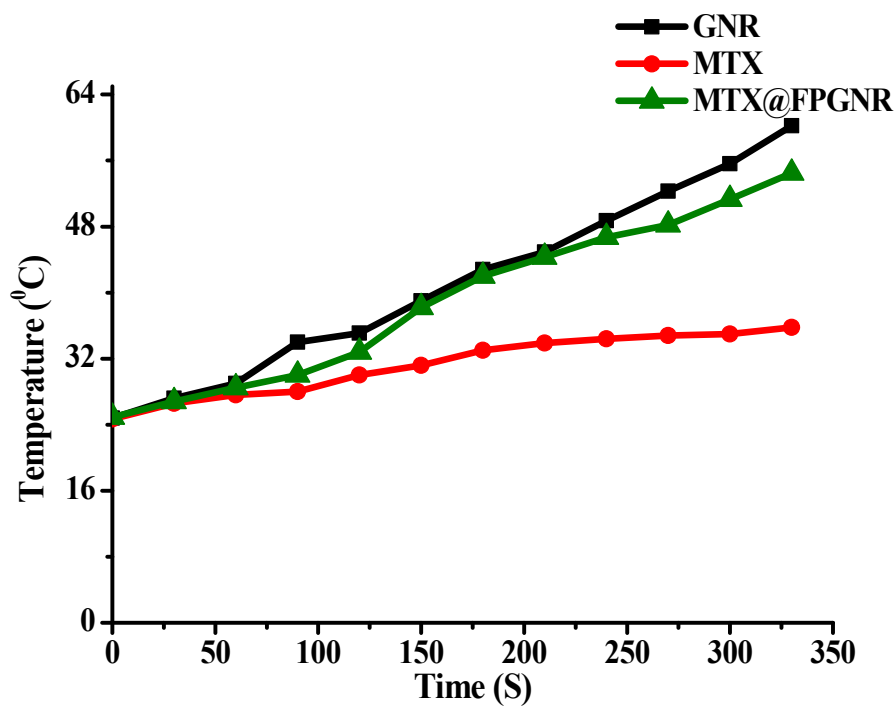


Fig S2: Time dependant heat generation upon irradiation with laser.

| Particle        | Zeta Potential (mV) |
|-----------------|---------------------|
| GNR             | +14.6               |
| PGNR            | +7.19               |
| FPGNR           | -5.86               |
| DPGNR           | -1.06               |
| DPGNR acidic pH | 4.93                |

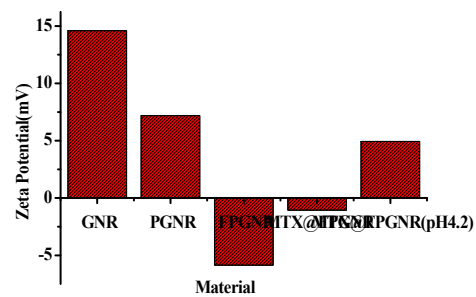
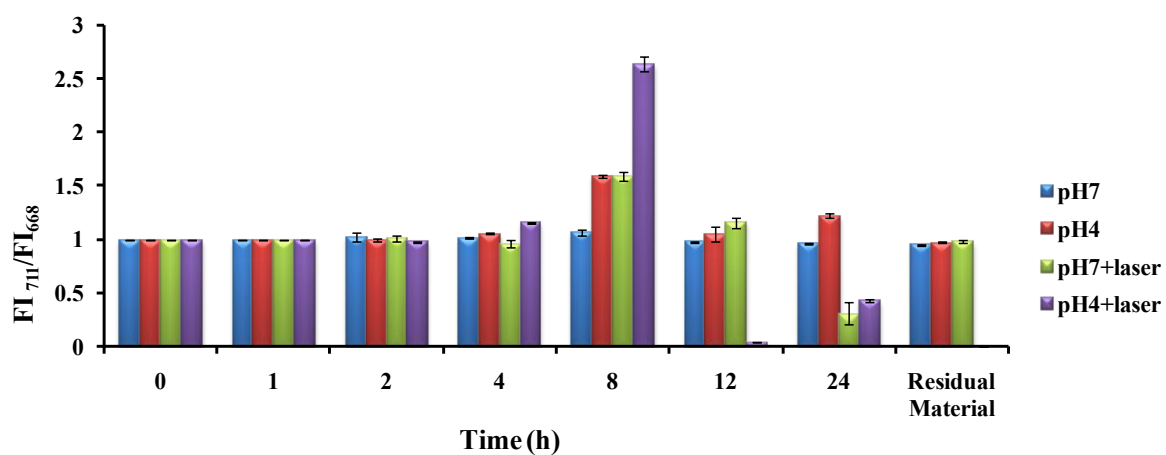
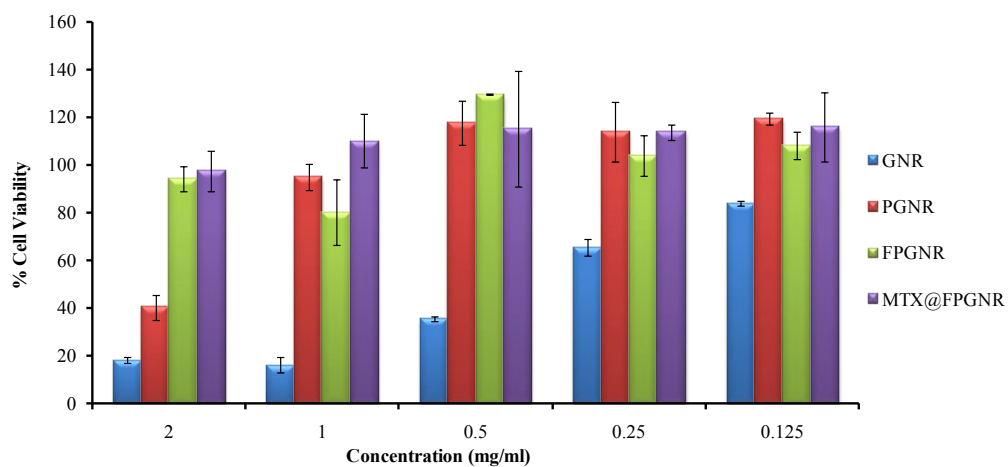


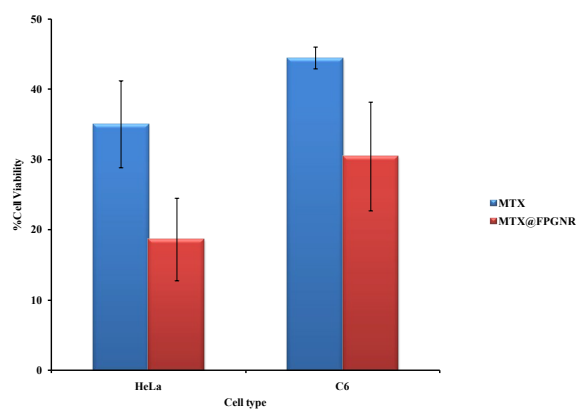
Fig S3: Zeta potential of GNR, PGNR, FPGNR and MTX@FPGNR.



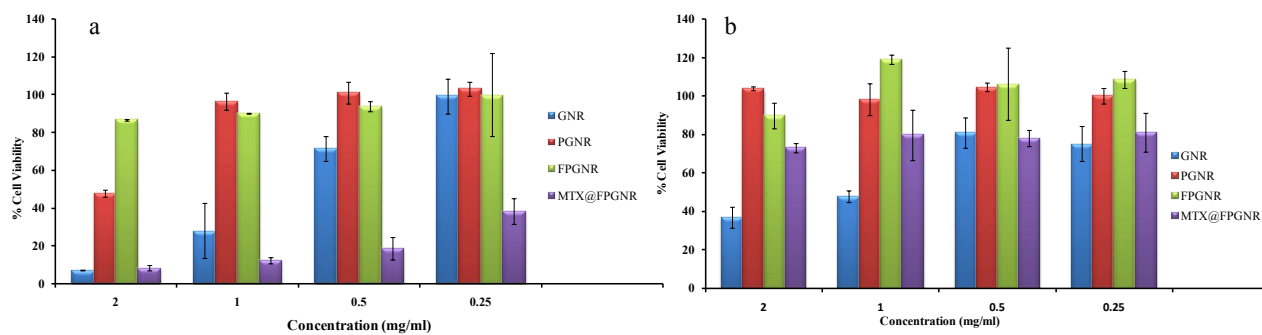
**Fig S4:** Drug release study of MTX@FPGNR.



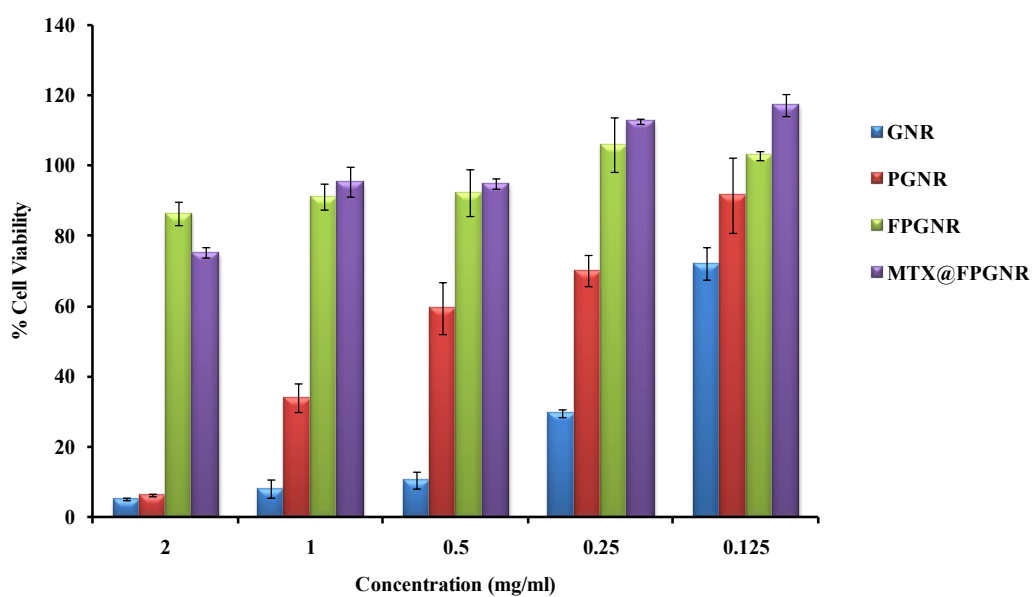
**Fig S5:** Cytotoxicity of GNR, PGNR, FPGNR and MTX@FPGNR in L929 cells.



**Fig S6:** MTT assay after 6h material incubation and irradiation with laser a) HeLa cell b) C6 with chemotherapy of MTX alone.



**Fig S7:** MTT assay after 6h incubation and laser irradiation a) HeLa b) C6.



**Fig S8:** MTT assay of HeLa cells incubated with different concentration of GNR, PGNR, FPGNR and MTX@FPGNR in 24h.