

Supplementary Materials

Controlled pDNA Release in Gemini Cationic Lipoplexes by Femtosecond Laser Irradiation of Gold Nanostars

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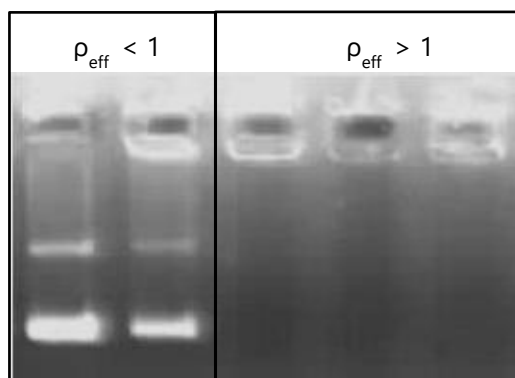


Figure S1. Agarose gel electrophoresis experiments of IGCL/DOPE-pDNA lipoplexes (without AuNSs). Adapted from *Biomacromolecules* **2013**, 14, 3951–3963 with permission of ACS Publications.

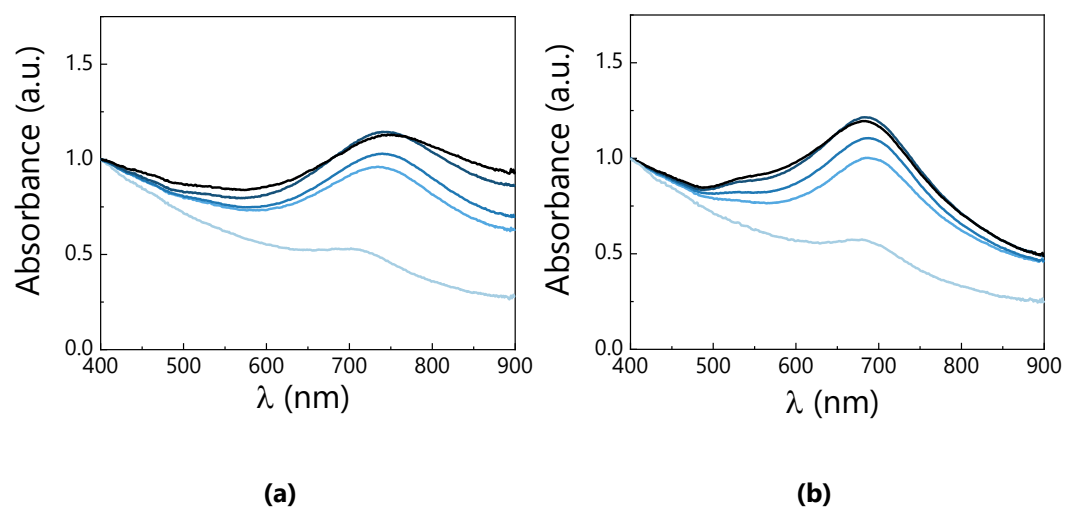


Figure S2. Normalized UV-vis-NIR spectra of the lipoplex-AuNS system under irradiated conditions, at 400 mW (a) and 700 mW (b) for 5 min, and at increasing AuNS concentration 20, 50, 100, 150 and 200 pM (from light to dark color).

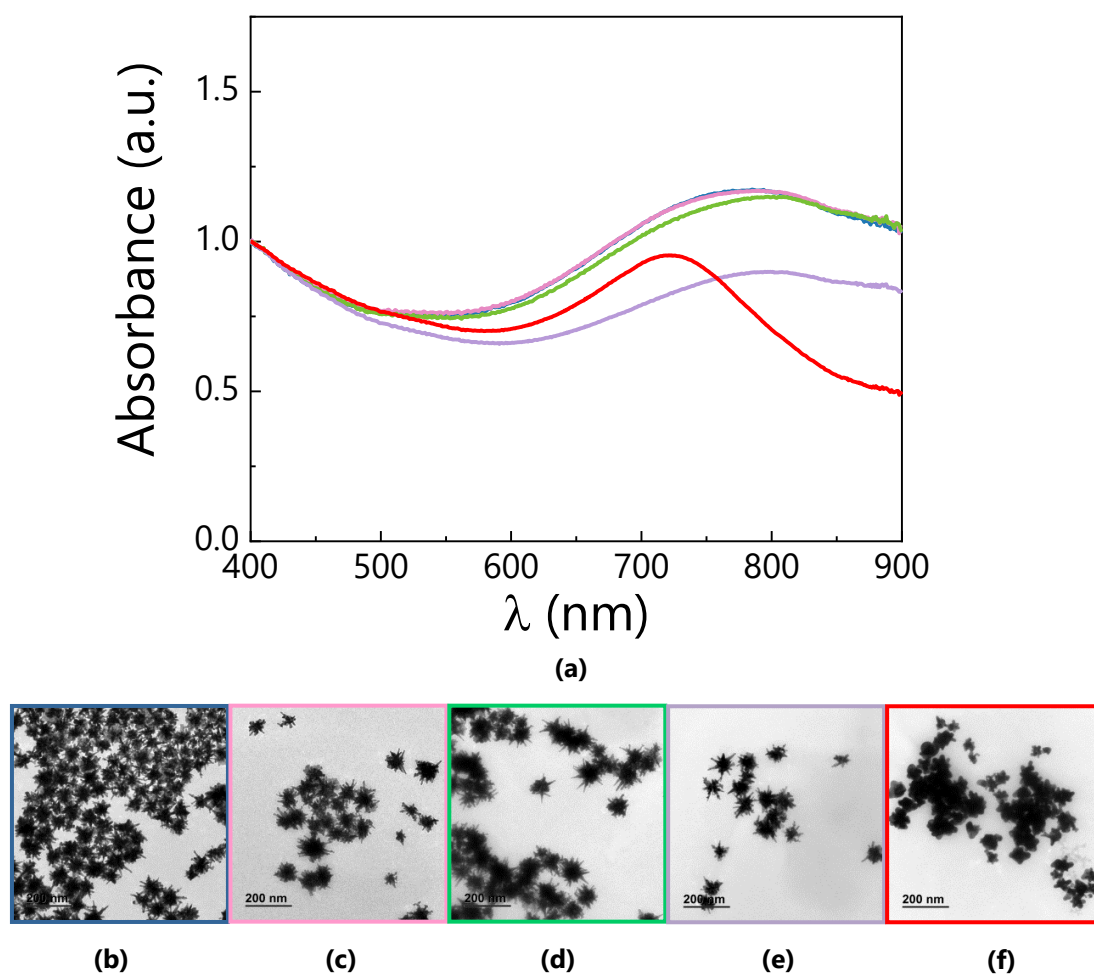


Figure S3. (a) Normalized UV-vis-NIR spectra of the lipoplex-AuNS system (100 pM AuNSs) under non-irradiated (blue line) and irradiated conditions, at 50 mW (pink line), 100 mW (green line), 200 mW (purple line) and 400 mW (red line) for 5 min. TEM micrographs of the lipoplex-Au NS systems (100 pM AuNSs) under non-irradiated conditions (b) and irradiated conditions at 50 mW (c), 100 mW (d), 200 mW (e), and 400 mW (f) for 5 min.

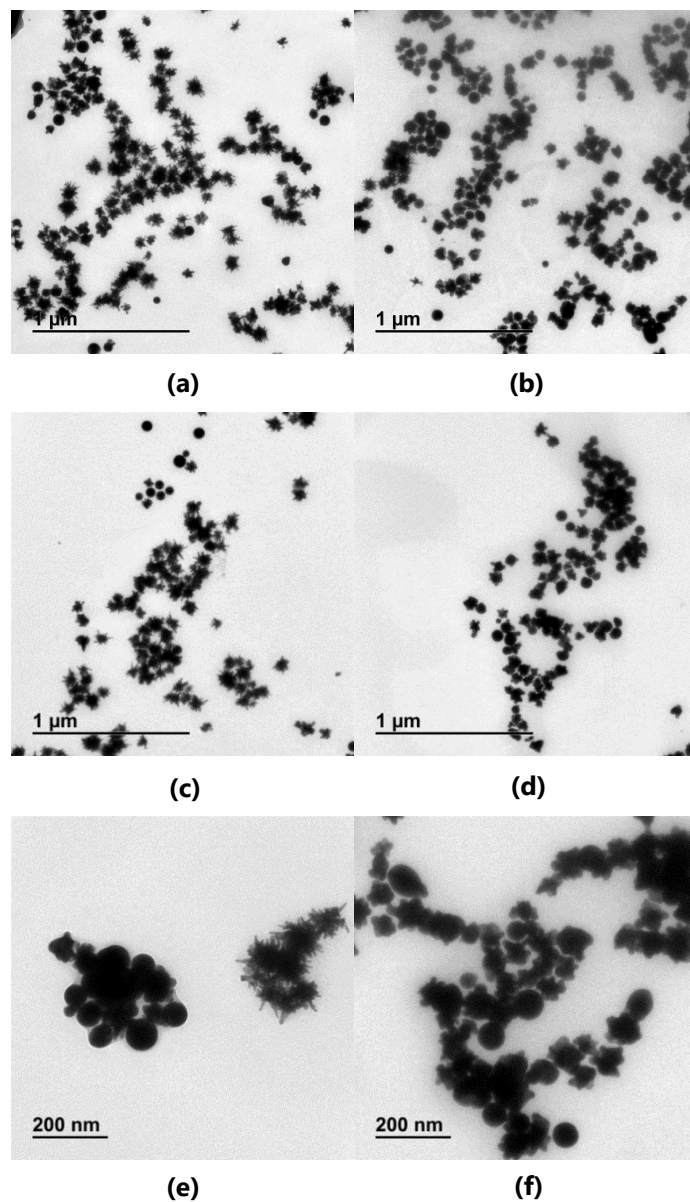


Figure S4. TEM micrographs of the lipoplex-AuNS system (200 pM AuNSs) at irradiated conditions of 400 mW (a,c,e) and 700 mW (b,d,f) for 5 min.

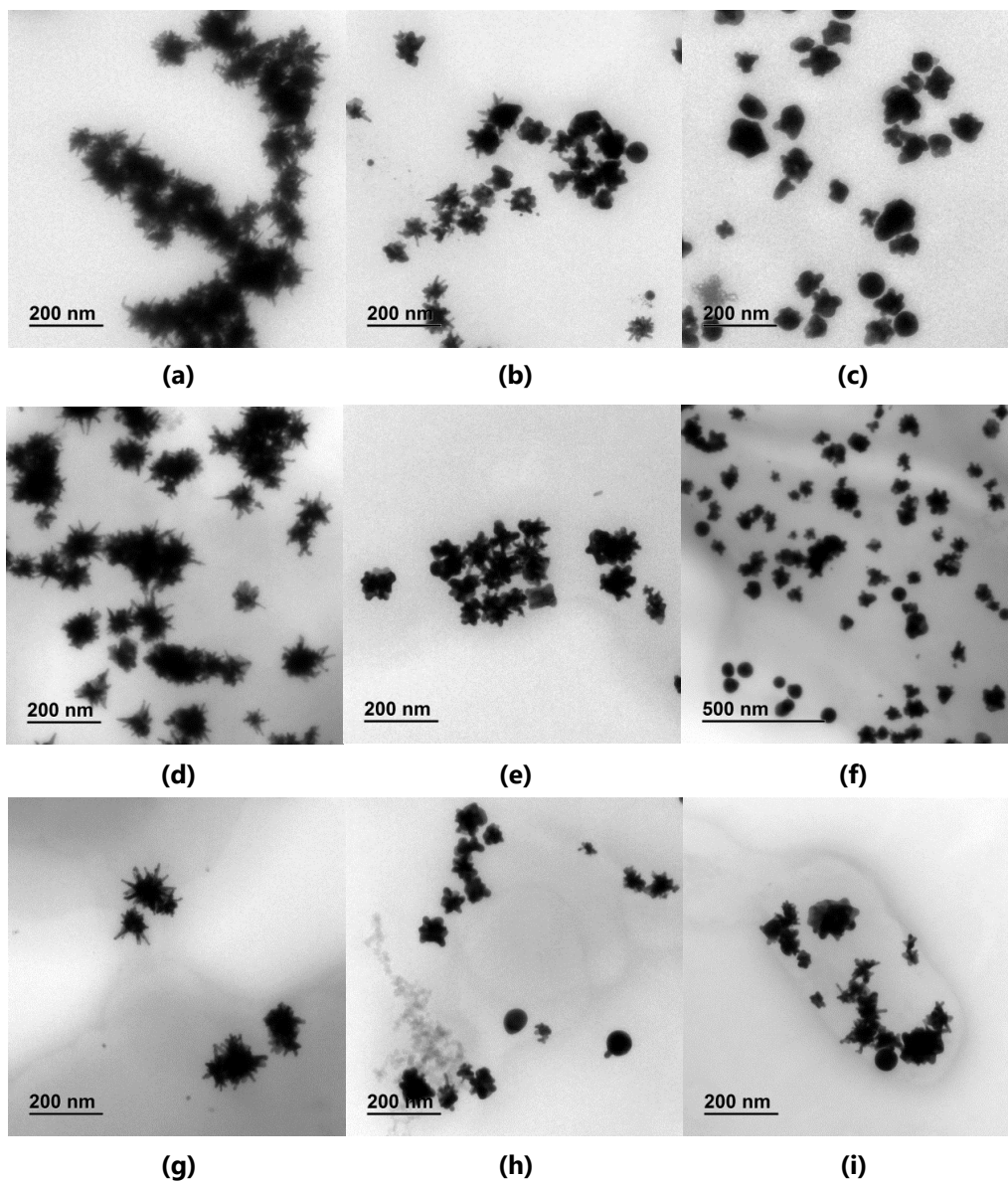


Figure S5. TEM micrographs of the lipoplex-Au NS system (150 pM AuNSs: a-c; 50 pM AuNSs: d-f; 20 pM AuNSs: g-i) at non-irradiated conditions (a,d,g) and at irradiated conditions of 400 mW (b,e,h) and 700 mW (c,f,i) for 5 min.

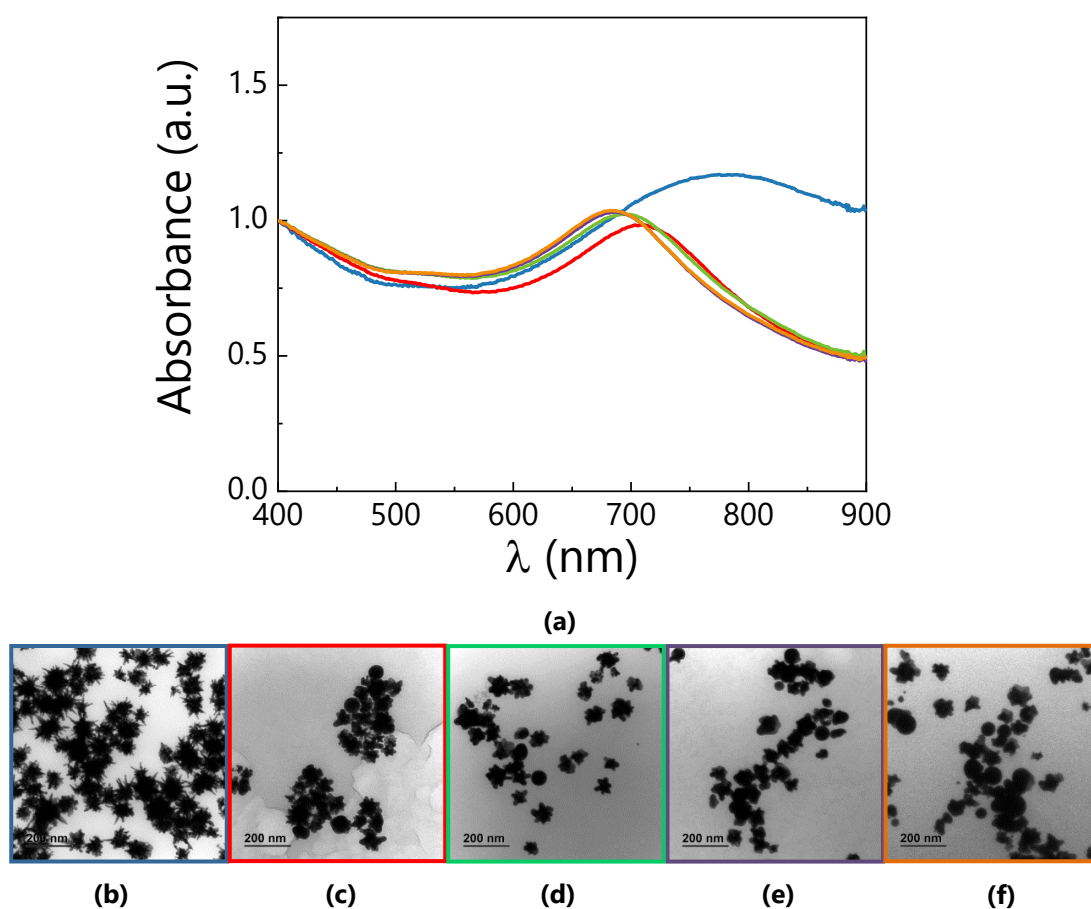


Figure S6. (a) Normalized UV-vis-NIR spectra of the lipoplex-AuNS system (100 pM AuNSs) under non-irradiated (blue line) and irradiated conditions, at 400 mW and different times: 5 min (red line), 15 min (green line), 30 min (purple line) and 60 min (orange line). TEM micrographs of the lipoplex-AuNS system (100 pM AuNSs) under non-irradiated (b) and irradiated conditions at 400 mW and different times: 5 min (c), 15 min (d), 30 min (e), and 60 min (f).

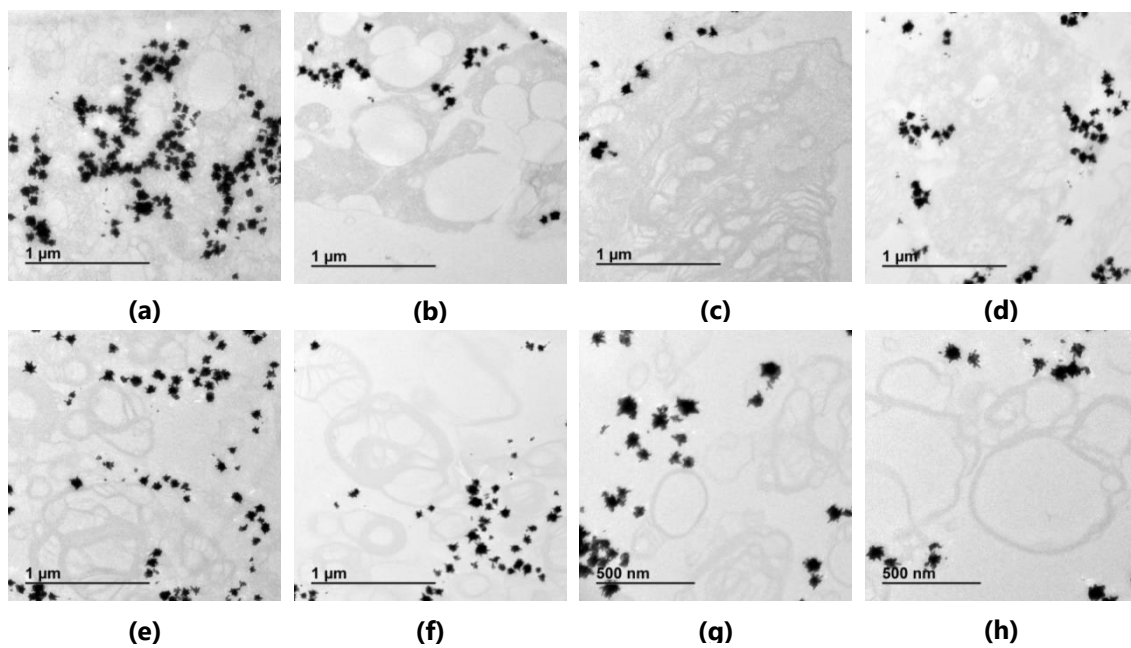


Figure S7. Stained TEM micrographs of the lipoplex-AuNSs (100 pM AuNSs) under irradiated conditions at 400 mW (a-d) and 100 mW (e-h) for 5 min (a,e), 15 min (b,f), 30 min (c,g) and 60 min (d,h).