



## Supporting Information

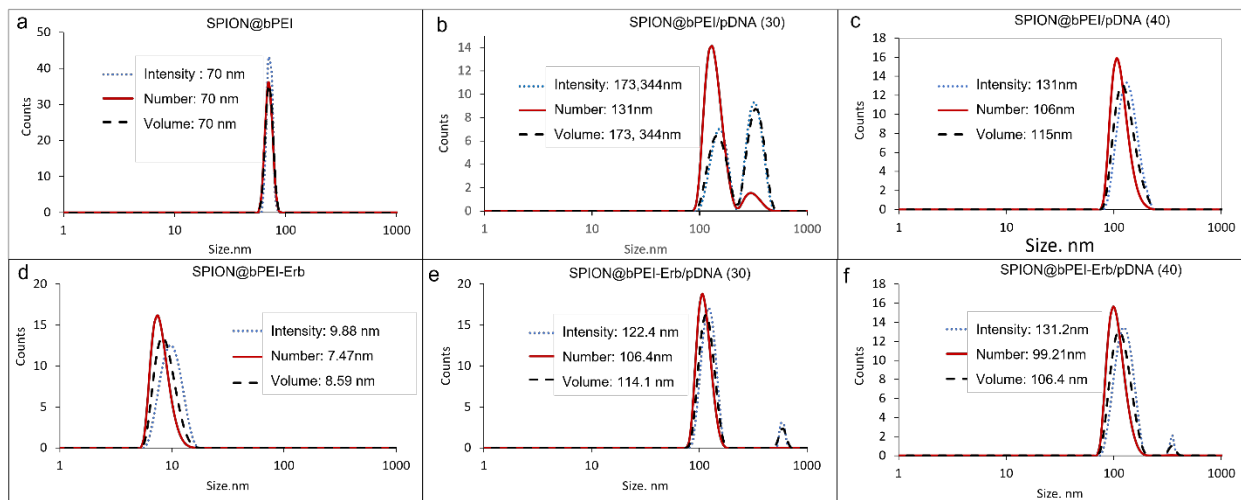
for

### **Theranostic potential of self-luminescent branched polyethyleneimine-coated superparamagnetic iron oxide nanoparticles**

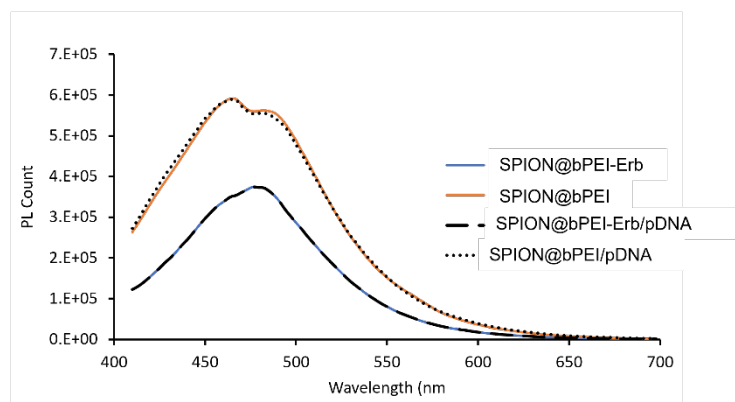
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*Beilstein J. Nanotechnol.* **2022**, *13*, 82–95. [doi:10.3762/bjnano.13.6](https://doi.org/10.3762/bjnano.13.6)

**Supporting Information contains dynamic light scattering (DLS), photoluminescence spectra, and zeta potential analysis of SPION@bPEI, SPION@bPEI/pDNA, SPION@bPEI-Erb, SPION @bPEI-Erb/pDNA, and SPION@bPEI-Erb/pDNA**



**Figure S1:** Panels (a–f) demonstrate the size of SPION@bPEI, SPION@bPEI/pDNA(30), SPION@bPEI/pDNA(40), SPION@bPEI-Erb, SPION @bPEI-Erb/pDNA(30), and SPION@bPEI-Erb/pDNA(40) complex, respectively. The size of nanoparticles is represented in all three forms as intensity, number, and volume. The numbers (30) and (40) represent the N/P ratios.



**Figure S2:** Photoluminescence spectra of SPION@bPEI and SPION@bPEI-Erb before and after plasmid DNA loading (SPION@bPEI/pDNA and SPION@bPEI-Erb/pDNA).

**Table S1:** Zeta potential of SPION@bPEI, SPION@bPEI/pDNA(30), SPION@bPEI/pDNA(40), SPION@bPEI-Erb, SPION@bPEI-Erb/pDNA(30), and SPION@bPEI-Erb/pDNA(40) complex.

<b>Sample</b>	<b>Zeta Potential Values (mV)</b>
SPION@bPEI	35.2
SPION@bPEI/pDNA (N/P=30)	23.62
SPION@PEI/pDNA (N/P=40)	27.68
SPION@bPEI-Erb	29.1
SPION@bPEI-Erb/pDNA(N/P=30)	21.6
SPION@bPEI-Erb/pDNA(N/P=40)	25.89