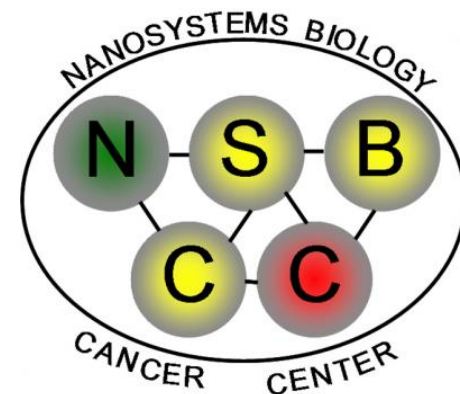


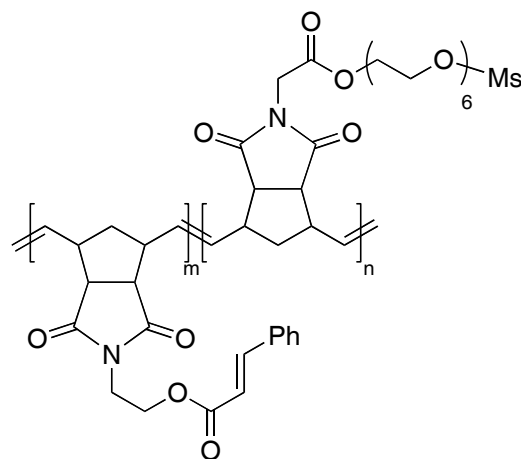
^{18}F Functionalized Nanoparticles as *in vivo* Molecular Imaging Agents



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ISOM XVII
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Block Copolymers

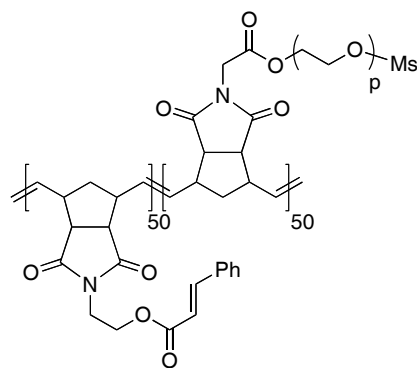


m	n	Mn (theo)	Mn (GPC)	PDI
15	17	15,200	17,600	1.015
30	30	27,700	33,200	1.013
50	57	49,800	61,200	1.009
100	106	95,600	115,300	1.012
198	192	178,500	155,800	1.004
393	390	359,300	435,300	1.014

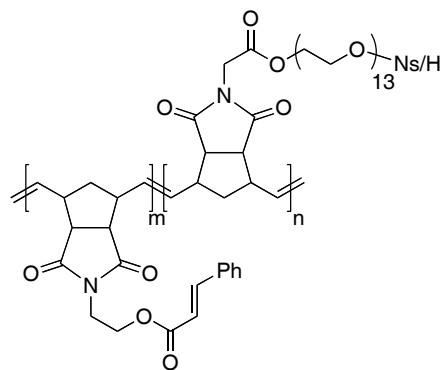
- The polymer molecular weights can be controlled by the amount of monomer added.
- The polydispersities are very low, indicating that all of these polymers are very nearly monodisperse

Factors affecting particle size

- The nanoparticle size is affected by both the length of the copolymer blocks and the length of the pendant PEG chain.

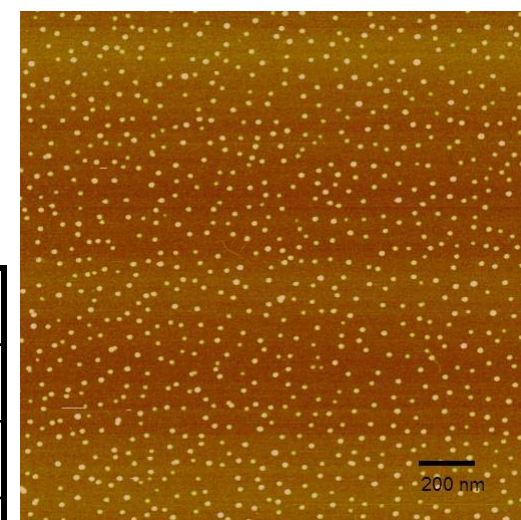


p	diameter (nm)
6	14.0 ± 3.3
9	17.3 ± 3.0
13	20.3 ± 3.3

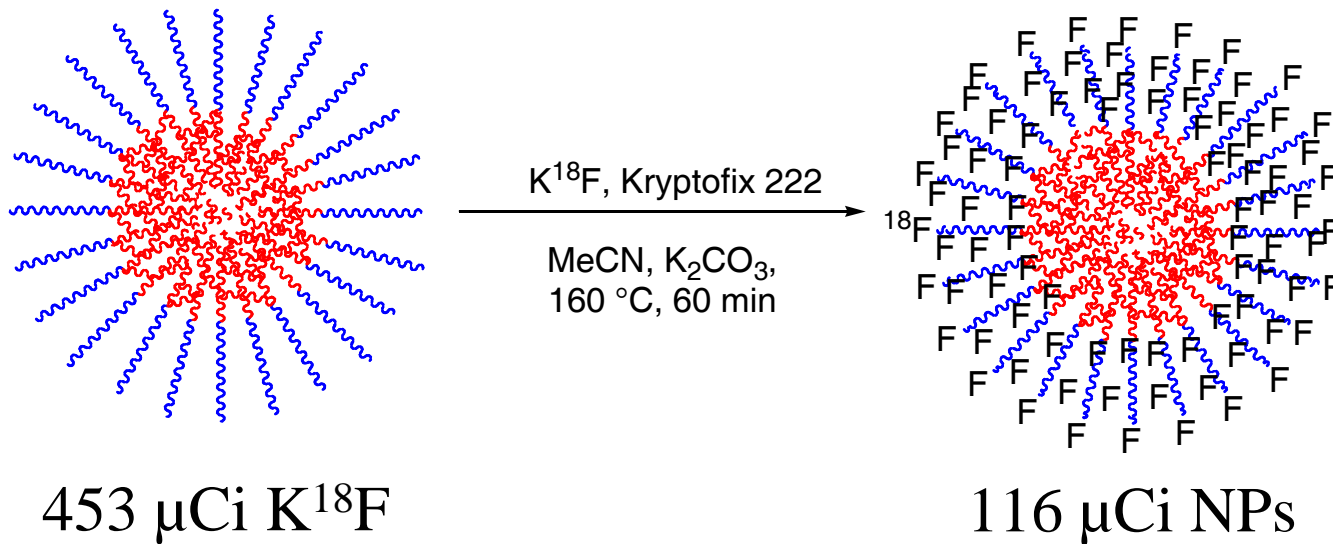


n	m	diameter (nm)
50	50	14.5 ± 3.4
100	100	16.9 ± 2.8
200	200	24.2 ± 6.3

AFM image of particles



Radiofluorination of Nanoparticles



- Accounting for the decay, 47% incorporation of fluorine-18 was achieved.
- These results indicates that about 25% of nanoparticles carry the fluorine-18 label.