

Accepted Manuscript

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PII: S0021-9797(17)31447-9
DOI: <https://doi.org/10.1016/j.jcis.2017.12.057>
Reference: YJCIS 23129

To appear in: *Journal of Colloid and Interface Science*

Received Date: 11 October 2017
Revised Date: 16 December 2017
Accepted Date: 19 December 2017

Please cite this article as: S. Buwalda, A. Al Samad, A. El Jundi, A. Bethry, Y. Bakkour, J. Coudane, B. Nottelet, Stabilization of poly(ethylene glycol)-poly(ϵ -caprolactone) star block copolymer micelles via aromatic groups for improved drug delivery properties, *Journal of Colloid and Interface Science* (2017), doi: <https://doi.org/10.1016/j.jcis.2017.12.057>

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Stabilization of poly(ethylene glycol)-poly(ϵ -caprolactone) star block copolymer micelles via aromatic groups for improved drug delivery properties

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Abstract

Hypothesis. The functionalization of poly(ethylene glycol)-poly(ϵ -caprolactone) (PEG-PCL) block copolymers with moieties allowing for core-crosslinking is expected to result in improved micellar stability and drug delivery properties.

Experiments. PEG-(PCL)₈ star block copolymers were functionalized with pendant benzylthioether (BTE) groups by applying an anionic post-polymerization modification technique followed by photoradical thiol-yne addition of benzyl mercaptan. The micellar properties of PEG-(PCL)₈ and PEG-

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