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Closed polymer containers based on phenylboronic esters of resorcinarenes

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Abstract

© 2018 Sergeeva et al. Novel polymer nanospheres (p(SRA-B)) were prepared by cross-linking a sulfonated resorcinarene (SRA) with phenylboronic acid. p(SRA-B) shows good stability in water and can be used as a nanocontainer for the pH- and glucose-controlled substrate release. Fluorescent dyes (fluorescein, pyrene and 1,3,6,8-pyrenetetrasulfonic acid tetrasodium salt) were successfully loaded into p(SRA-B). The release of dye is achieved by lowering the pH value to 3 or by adding glucose.

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Keywords

boronic acid, Polymer nanocontainer, Resorcinarene, Responsive release

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