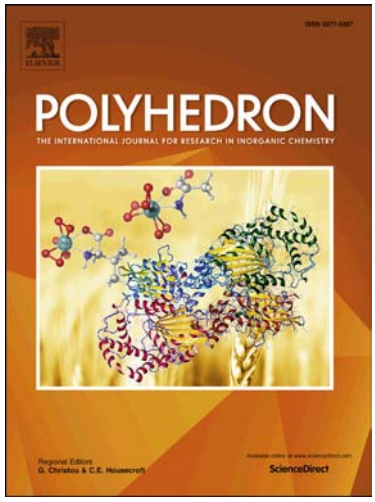


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Aylin Uslu, Elif Özcan

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# Synthesis of Water Soluble Cyclotriphosphazenes with Thiazole-Containing Side Groups: Amphiphilic and Hydrolytic Degradable

Aylin Uslu*, Elif Özcan

Department of Chemistry, Gebze Technical University, Gebze 41400, Kocaeli, Turkey

∗ Corresponding author. Tel.: +90 262 6053009.

E-mail address: aylin@gtu.edu.tr

## ABSTRACT

A series of a new class of amphiphilic cyclophosphazene derivatives, consisting of thiazole side groups and polyethyleneglycol or ethyleneglycol moieties as cosubstituent groups were prepared and characterized using spectroscopic methods. Reported compounds were examined in order to investigate their hydrolytic degradation and concentration-dependent lower critical solution temperatures (LCST) behaviors in aqueous solution. These amphiphiles bearing polyethyleneglycol as a hydrophilic group were found to have LCST being close body temperature compared with ethyleneglycol analogues and potentially useful for biomedical applications.

**Keywords:** Cyclophosphazene, thiazole, LCST, hydrolytic degradation, $^{31}$P NMR