

Macroheterocycles 2014 vol.7 N1, pages 10-17

---

## Bifunctional derivatives of (Thia)calix[4]arenes with terminal double and triple bonds: Synthesis and azide-alkyne click reactions

Burilov V., Nugmanov R., Popova E., Nabiullin I., Soloviev S., Antipin I., Konovalov A.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

### Abstract

The synthesis of bifunctional derivatives of calix[4]arene and its thia-analogue containing double and triple bonds in 1,3-alternate and partial cone conformations was performed. The effect of tert-butyl groups at the upper rim of the macrocycle on the stereochemical result of the reaction is shown. Triple bonds of the synthesized bifunctional compounds readily undergo Cu(I)-catalyzed 1,3-dipolar cycloaddition reactions with azides. © ISUCT Publishing.

<http://dx.doi.org/10.6060/mhc140272b>

---

### Keywords

1,3-dipolar cycloaddition reactions, Alkylation, Calix[4]arenes, Click chemistry, Terminal alkynes