Abstract

The aim of this work was to synthesize a series of new compounds capable to show supramolecular interactions with cyclodextrins, such as adamantane or ibuprofen, which also contain permanent positive charges. Therefore, they can be bound electrostatically on negatively charged surfaces. Plasma treated surface which contains carboxylate groups and polymer Nafion® 117 with sulfonate groups have been used as such surfaces.

The synthesis has started with introduction of the azido group into the molecule and has been followed by copper catalyzed azide/alkyne cycloaddition reaction with a linker containing positive charges and a propargyl group.

Optimal conditions of a binding onto the solid surface and a dependence of the bond stability in water solutions on pH and concentration of salts have been evaluated for selected components using UV spectrometry.

Key words: *synthesis, positively charged compounds, electrostatic binding, plasma treated surfaces*