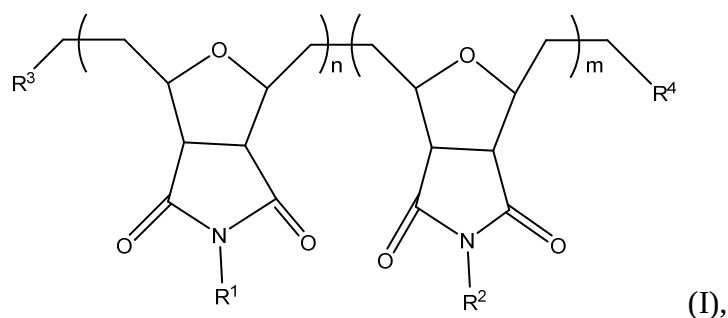


## ABSTRACT OF THE DISCLOSURE

Disclosed are self-assembled structures formed from self-assembling block copolymers, for example, a diblock copolymer of the formula (I):



wherein  $R^1$ - $R^4$ ,  $n$ , and  $m$  are as described herein, which find use in preparing nanoporous membranes. In an embodiment, the block copolymer self-assembles into a cylindrical morphology. Also disclosed is a method of preparing such membrane which involves spin coating a polymer solution containing the block copolymer to obtain a thin film, followed by solvent annealing of the film. Further disclosed is a method of preparing porous membranes from the self-assembled structures.

[Figure 3]