

課題番号 : F-20-KT-0028
利用形態 : 機器利用
利用課題名(日本語) : ナノフォーム
Program Title (English) : Nanofoam
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キーワード/Keyword : Nanocellula foam, Chemical foaming, Self-assembly, Thin film, Photoacid generators, Morphology observation

1. 概要(Summary)

In this project, we have investigated the morphology of self-assembled PMMA-b-PtBA using the SEM at Nanohub. The self-assembled thin films were obtained by solvent casting a PMMA-b-PtBA. The sample was sliced by a microtome and the thin-sliced sample was observed by the SEM.

2. 実験(Experimental)

【利用した主な装置】

超高分解能電界放出形走査電子顕微鏡, 走査型プローブ顕微鏡システム, 分光エリプソメーター

【実験方法】

The self-assembled morphology was observed by SEM with 10 kV accelerating voltage and 1 μ A electron current. Prior to the measurement, the approximately 1 nm of Pt was spluttered on the sample.

3. 結果と考察(Results and Discussion)

SEM image of the solvent casted PMMA-b-PtBA film is shown in Figure 1, where stripe patterns with ~ 35 nm pitch were observed. Combined with previous SAXS results, formation of PtBA cylindrical domains in a PMMA matrix could be confirmed.

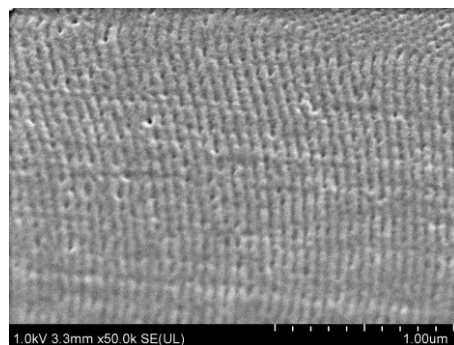


Figure 1: SEM images of PMMA-b-PtBA films formed by solvent casting.

4. その他・特記事項(Others)

関連文献:

1. P. Rattanakawin et al., J PHOTOPOLYM SCI TEC **31(5)**, 2018, 647
2. P. Rattanakawin et al., J PHOTOPOLYM SCI TEC **32(5)**, 2019, 693
3. P. Rattanakawin et al., FOAMS 2019 (October 2-3, 2019, Valladolid, Spain)
5. 論文・学会発表(Publication/Presentation)
なし
6. 関連特許(Patent) なし