

課題番号 : F-14-BA-06
 利用形態 : 機器利用
 利用課題名(日本語) :
 Program Title (English) : Migration and movement control of fiber breast cell
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1. 概要(Summary)

Cellular migration and movement can be controlled by surface morphology and topography changes. In this research, we designed and fabricated several types of micro-/nano-structures onto the cell culture substrates and investigated the relationship between the topography change and cellular migration.

2. 実験(Experimental)

The Laser Write (露光装置) was utilised to fabricate photomask, which can be used to make micro-/nano-structures silicon template via microfabrication process.

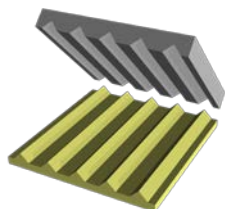


Fig. 1 Illustration of the micro-/nano-structures pattern fabrication using imprinting approach.

3. 結果と考察(Results and Discussion)

The dimensions of micro-patterns on the fabricated photomask matched with the original design as shown in Fig. 2. Different



Fig. 2 Photo images of the micro-/nano-patterns on the photomask.

micro-/nano-patterns successfully fabricated and transferred onto the polymer substrate as demonstrated on Fig. 3.

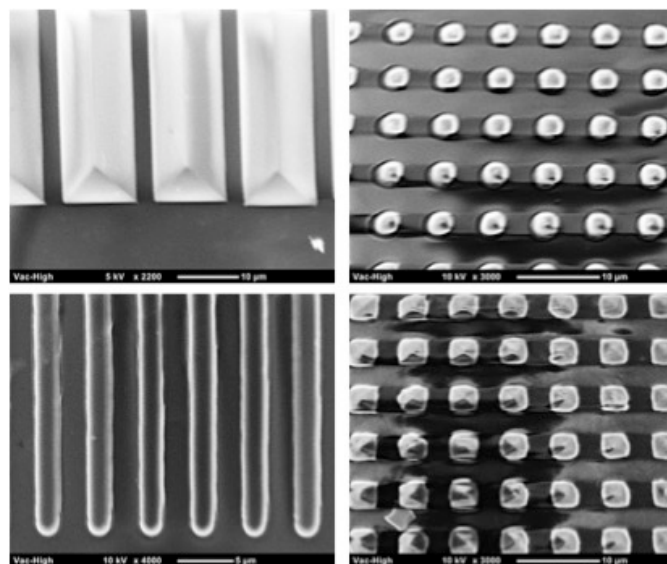


Fig. 3 SEM images of the micro-/nano-patterns on the polymer substrate.

4. その他・特記事項(Others)

・No

5. 論文・学会発表(Publication/Presentation)

(1) Wei-Chih Lin, Koichiro Uto, Qinghui Shou, Mitsuhiro Ebara, Baiyao Xu and Takao Aoyagi, 'Surface modification of hetero-material substrates by plasma treatment for fibroblast cell culture,' The 10th SPSJ International Polymer Conference (IPC2014), pp. 461, 2014.

6. 関連特許(Patent)

(1) No.