

課題番号 : F-18-TU-0117
利用形態 : 機器利用
利用課題名(日本語) : 薄膜デバイスの微細加工プロセスの検討
Program Title (English) : Examination of microfabrication process of thin film device
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キーワード/Keyword : リソグラフィ・露光・描画装置

1. 概要(Summary)

7-inch square photomasks were manufactured using laser drawer. By microscopic observation, it was confirmed that a Cr pattern not different from the design pattern was formed.

2. 実験(Experimental)

【利用した主な装置】

レーザー描画装置 (HIMT DWL2000 Laser drawing)

【実験方法】

Previously Cr deposited and resist-coated glass plates were patterned with laser drawing machine. Resist was developed with resist developer and water mixture in draft chamber then cleaned with DI water intensively and dried with N₂ blow. Developed pattern was checked under microscope. Glass plate transferred to another draft chamber and Cr was patterned with Cr etchant and washed with submerging to DI water then dried with N₂ blow. Glass plate was transferred to Pyrex container for further cleaning with piranha solution then washed with DI purge. Glass plate was taken from Pyrex container and left lean on draft chamber window to dry atmospherically (Fig. 1).

Four masks were fabricated with indicated procedure at above paragraph.

3. 結果と考察(Results and Discussion)

It was confirmed using a microscope that the pattern formation as designed was successful. We

will investigate the sensor fabrication process using the fabricated mask set.

4. その他・特記事項(Others)

We are grateful to technical support of Masaaki Shoji of Nishizawa Center, Tohoku University.



Fig. 1 Drying mask after piranha cleaning.

5. 論文・学会発表(Publication/Presentation)

なし。

6. 関連特許(Patent)

なし。