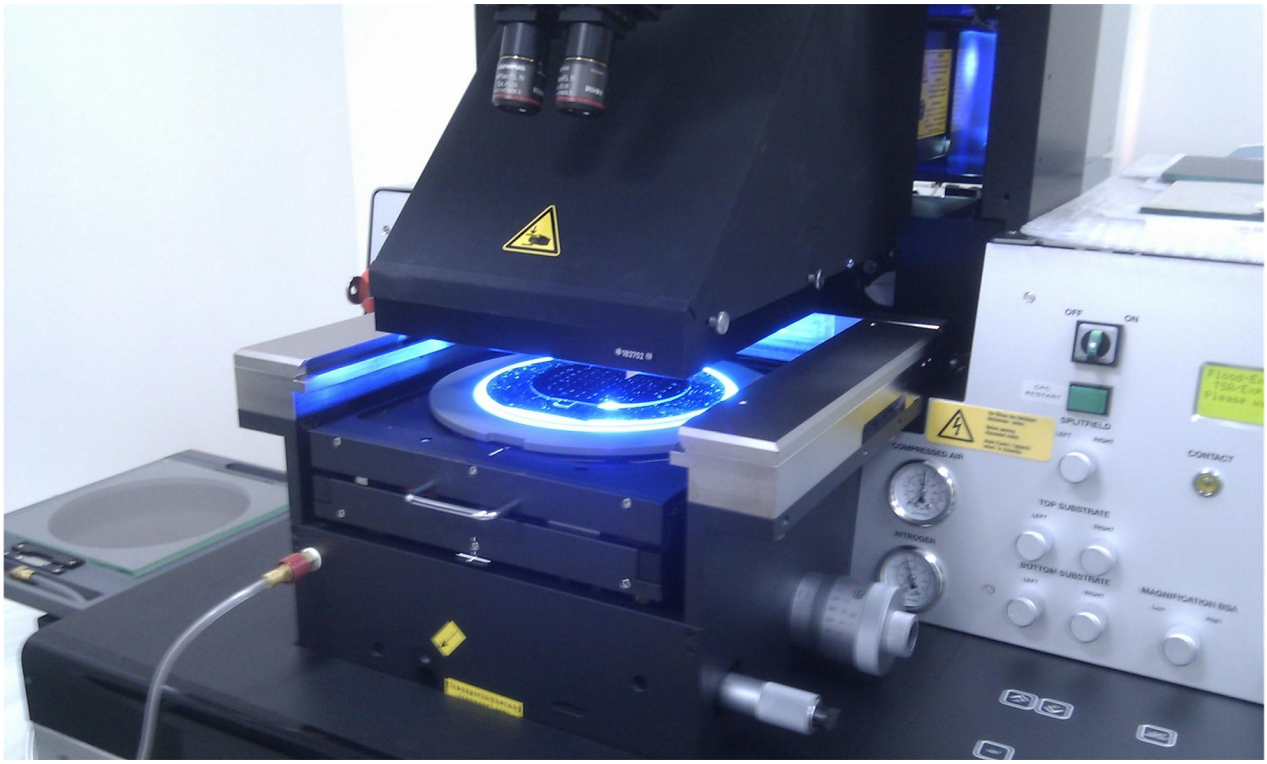
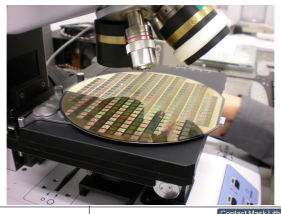
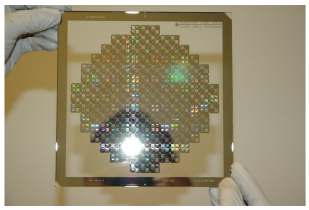
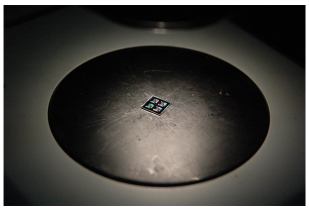
UV Mask Aligner Photolithography

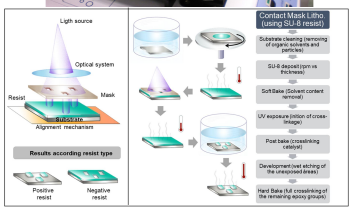
Nano and micro-manufacture using the photolithographic mask alignment technique for photoresists that are sensitive to ultraviolet.











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ODS

Available from: 2021

Where?

Center for Biomedical Technology Photonic and Biophotonic Optics Group (GOFB)

Keywords: | lithography | micro fabrication | nano fabrication | photolithography

Scientific and technology services

UV Mask Aligner Photolithography

KEY WORDS: micro-manufacture, nano-manufacture, lithography, photolithography.

Description of the services offered

The photolithography machine available makes micro-structures at wafer level using mask projection. The equipment in question has a mask aligner that allows multi-structure compound structures to be made. Apart from the machine, hot plates are available to treat the photoresist, as is a laminar flow hood, which prevents contamination and dirt between the wafers.
The service provided can be adapted to the needs of whoever requests it, with the service being divided into different processes:
¿ Photolithography and developing
¿ Photoresist deposit, photolithography and developing
¿ Photoresist deposit, thickness profiling, photolithography and developing
Renting a lithography mask or designing and making one ad hoc are also offered.

Needs requested and applications

Integration and miniaturisation are the order of the day. Using photolithography multiple structures with several layers can be integrated into a single circuit.

Sector or area of application

Micro and nano manufacture

Differential skills

The production equipment enables innovation with many materials and geometries. The microscope it includes enables highly precise positioning on previously produced structures. Furthermore, by complementing the equipment with the other optical profiling instruments, manufacture can be supervised at all times.

Equipment description

Mask aligner photolithographic machine MA-6 made by SÜSS MicroTec GmbH. Exposure to ultraviolet light is carried out using a mercury vapour lamp which has the following main emission peaks: 435.8 nm (g-line), 404.7 nm (h-line) and 365.4 nm (i-line). Lithography can be done on 6¿ wafers as well as for smaller sized substrates.
There is also a stock of lithographic masks that can be rented:
¿ 200 um (6´) mask for 65 cell Chips.
¿ 100 um (6´) mask for 65 cell Chips.
¿ 200 um (4´) mask for 16 cell Chips.
¿ 100 um (4´) mask for 3 cell Chips. Positive and negative mask.
¿ 200 um (4´) mask for 3 cell Chips. Positive and negative mask.
¿ 800 um (4´) mask for 3 cell Chips.
¿ Various masks with different templates, for reference or research matters.

Request for service

Contact by e-mail, putting ¿PROVISION OF SERVICE¿ in the subject, and the service in question with an approximate description of what is required and the time line in the body of the e-mail.
Contact e-mails: info.gofb@gmail.com or betxu.santamaria@upm.es

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