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Tender

# Ultra-High Resolution Scanning thermal probe nanolithography with hybrid micro-nanolithography & 3D lithography capabilities.

UNIVERSITY OF MANCHESTER

F02: Contract notice

Notice identifier: 2021/S 000-023833

Procurement identifier (OCID): ocds-h6vhtk-02e48c

Published 24 September 2021, 2:52pm

#### **Section I: Contracting authority**

#### I.1) Name and addresses

UNIVERSITY OF MANCHESTER

Room G010, John Owens Building, Oxford Road

**MANCHESTER** 

M139PL

#### **Contact**

Jan Disley

#### **Email**

janet.disley@manchester.ac.uk

#### **Telephone**

+44 1612753912

#### Country

**United Kingdom** 

#### **NUTS** code

UKD33 - Manchester

#### Internet address(es)

Main address

https://in-tendhost.co.uk/universityofmanchester/aspx/Home

#### I.3) Communication

The procurement documents are available for unrestricted and full direct access, free of charge, at

https://www.staffnet.manchester.ac.uk/finance/purchasing/

Additional information can be obtained from the above-mentioned address.

Tenders or requests to participate must be submitted to the above-mentioned address

#### I.4) Type of the contracting authority

Body governed by public law

#### I.5) Main activity

Education

#### **Section II: Object**

#### II.1) Scope of the procurement

#### II.1.1) Title

Ultra-High Resolution Scanning thermal probe nanolithography with hybrid micronanolithography & 3D lithography capabilities.

Reference number

2021/1809/URSNL/RB

#### II.1.2) Main CPV code

• 38514200 - Scanning probe microscopes

#### II.1.3) Type of contract

**Supplies** 

#### II.1.4) Short description

Ultra-High Resolution Scanning thermal probe nanolithography with hybrid micronanolithography & 3D lithography capabilities.

The AFM/thermal lithography system will enable patterning physical and chemical features with the nanoscale resolution, which is decisive for molecular devices and 2D-material devices. In addition, the integration of AFM, laser writing and thermal imaging has the potential for the development of new experimental techniques on correlation aspects of scanning based nanoscopy.

The proposed platform must include AFM-based thermal lithography system equipped with grey scale patterning.

Critically, the proposed platform must be fully compatible with argon/nitrogen-filled glovebox to enable operation in an inert environment.

#### II.1.6) Information about lots

This contract is divided into lots: No

#### II.2) Description

#### II.2.2) Additional CPV code(s)

• 38000000 - Laboratory, optical and precision equipments (excl. glasses)

#### II.2.3) Place of performance

**NUTS** codes

• UKD3 - Greater Manchester

Main site or place of performance

The University of Manchester

#### II.2.4) Description of the procurement

Ultra-High Resolution Scanning thermal probe nanolithography with hybrid micronanolithography & 3D lithography capabilities.

With the increasing demands on devices comprising nanoscale features with high resolution (e.g., in high performance computing, high density data storage, devices operating in THz range, sub-wavelength waveguides, photonic crystals and plasmonic structures, to name a few) and reducing power consumption by scaling electronic devices to sub-10 nm, new materials and new lithographic techniques are pivotal.

Scanning thermal probe lithography with unique capabilities surpassing conventional nanofabrication techniques will address this requirement. AFM-based nanolithography, integrated with laser writer capable of working in an inert environment to work with van der Waals micromanipulation platform will provide such beyond-state-of-the-art environment where electrical, elastic, mechanical, optical and chemical components of novel materials and their heterostructures will be patterned simultaneously, leading to novel scientific effects and industrial applications.

#### II.2.5) Award criteria

Price is not the only award criterion and all criteria are stated only in the procurement documents

## II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

29 October 2021

End date

31 May 2022

This contract is subject to renewal

No

#### II.2.10) Information about variants

Variants will be accepted: No

#### II.2.11) Information about options

Options: No

# Section III. Legal, economic, financial and technical information

#### III.1) Conditions for participation

#### III.1.2) Economic and financial standing

Selection criteria as stated in the procurement documents

#### III.1.3) Technical and professional ability

Selection criteria as stated in the procurement documents

#### **Section IV. Procedure**

#### IV.1) Description

#### IV.1.1) Type of procedure

Open procedure

Accelerated procedure

Justification:

Please note that the University of Manchester conducted this procurement under an open accelerated Procedure under Regulation 27(5) of the Public Contract Regulations. This is due to the state of urgency connected with the delivery of the research outcomes and adherence to funding requirements.

#### IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes

#### IV.2) Administrative information

#### IV.2.2) Time limit for receipt of tenders or requests to participate

Date

12 October 2021

Local time

12:00pm

#### IV.2.4) Languages in which tenders or requests to participate may be submitted

**English** 

### IV.2.6) Minimum time frame during which the tenderer must maintain the tender

Duration in months: 3 (from the date stated for receipt of tender)

#### IV.2.7) Conditions for opening of tenders

12 October 2021
Local time
2:00pm
Place
The University of Manchester
Information about authorised persons and opening procedure
University of Manchester Staff

Date

#### **Section VI. Complementary information**

#### VI.1) Information about recurrence

This is a recurrent procurement: No

#### VI.2) Information about electronic workflows

Electronic ordering will be used

Electronic invoicing will be accepted

Electronic payment will be used

#### VI.4) Procedures for review

#### VI.4.1) Review body

The High Court of Justice of England

London

WC2A

Country

**United Kingdom** 

#### VI.4.3) Review procedure

Precise information on deadline(s) for review procedures

The authority will incorporate a minimum 10 calendar day standstill period at the point information on the award of the contract is communicated to tenderers. Applicants who are unsuccessful shall be informed by the authority as soon as possible after the decision has been made as to the reasons why the Applicant was unsuccessful. The purpose of the standstill period referred to above is to allow the parties to apply to the Courts to set aside the award decision before the contract is entered into.