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Award

sSNOM for University of Manchester

National Physical Laboratory

F15: Voluntary ex ante transparency notice
Notice identifier: 2022/S 000-029139
Procurement identifier (OCID): ocds-h6vhtk-037636
Published 17 October 2022, 11:50am

Section I: Contracting authority/entity

I.1) Name and addresses

National Physical Laboratory

Hampton Road

Teddington

TW11 0LW

Email

nina.heath@npl.co.uk

Country

United Kingdom

Region code

UK - United Kingdom

Internet address(es)

Main address

www.npl.co.uk

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Other activity

Research

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

sSNOM for University of Manchester

II.1.2) Main CPV code

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

II.1.3) Type of contract

Supplies

II.1.4) Short description

Procurement of scattering-type near-field optical microscope (VIS-neaSCOPE) that enables simultaneous background-free imaging and spectroscopy on nanometre length scales in the visible range.

II.1.6) Information about lots

This contract is divided into lots: No

II.1.7) Total value of the procurement (excluding VAT)

Value excluding VAT: 460,500 EUR

II.2) Description

II.2.3) Place of performance

NUTS codes

- UK - United Kingdom

Main site or place of performance

NPL Management Ltd

Hampton Road

Teddington

TW11 0LW

II.2.4) Description of the procurement

Neaspec (attocube) is the only company worldwide, who manufactures a scattering-type near-field optical microscope (VIS-neaSCOPE) that enables simultaneous background-free imaging and spectroscopy on nanometre length scales in the visible range. Their exclusive design works with the following patents:

- Patented parabolic mirror design for focusing and collection of light

- Patented dual-port design to allow two beams of light to be focused on the atomic force microscope (AFM) tip for nanoscale imaging and spectroscopy

- Patented signal processing for optical background suppression

- Patented pseudo-heterodyne detection (PsHEt) technology for background suppression

- Patented interferometric design (nano-FTIR) for background-free optical detection technology and simultaneous detection of optical amplitude and phase and hyperspectral imaging

- Patented high speed holography (HSH) for multispectral imaging

- Patend phase shifting (PhS) detection to extract relative phase

These patents and the exclusive design have enabled the VIS-neascope system to conduct amplitude and phase-resolved vector field, reflection and absorption mapping with nanoscale spatial resolution. It is currently the only system on the market that enables dual-port operation combined with a high NA parabolic mirror, which is essential for low SNR pump-probe measurements in the visible range. The VIS-neascope system is

also the only system offering pseudoheterodyne background-free detection of the amplitude and phase of the near-field signal up to the 5th harmonic order, which is another essential requirement for s-SNOM in the visible range.

In addition, the vis-neaSCOPE offers the following unique technical specifications:

- Optimised scanning probe microscope system that can be combined with mechanical and electrical measurements

- Built-in optical imaging and spectroscopy software modules, as well as data visualisation and analysis software

- Position sensors for motorised parabolic mirror axes to enable alignment-free focusing of a laser beam to the AFM tip

- Visible and NIR illumination units, which can be integrated and coupled into both the room-temperature and cryogenic temperature s-SNOM system.

The system is also flexible and can be upgraded to operate in other wavelength ranges (out to THz range), perform electrical measurements, nano-PL, nano-Raman and photothermal expansion mapping in the future.

In particular, neaspec is the only company who can upgrade the existing cryogenic s-SNOM system (cryo-neaSCOPE) based at University of Manchester and integrate a visible illumination unit to perform nanoscale imaging and spectroscopy at low temperature.

II.2.5) Award criteria

Cost criterion - Name: Technical / Weighting: 70%

Cost criterion - Name: Commercial / Weighting: 30%

II.2.11) Information about options

Options: No

II.2.13) Information about European Union Funds

The procurement is related to a project and/or programme financed by European Union funds: No

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Award of a contract without prior publication of a call for competition in the cases listed below

- The procurement falls outside the scope of application of the regulations

Explanation:

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Related PIN reference number: 2022-040278

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

The procurement is covered by the Government Procurement Agreement: Yes

Section V. Award of contract/concession

A contract/lot is awarded: Yes

V.2) Award of contract/concession

V.2.1) Date of conclusion of the contract

17 October 2022

V.2.2) Information about tenders

The contract has been awarded to a group of economic operators: No

V.2.3) Name and address of the contractor/concessionaire

attocube system AG

nanoscale analytics, Eglfinger Weg 2,

Haar

85540

Country

Germany

NUTS code

- DE - Germany

The contractor/concessionaire is an SME

Yes

V.2.4) Information on value of contract/lot/concession (excluding VAT)

Total value of the contract/lot/concession: 460,500 EUR

V.2.5) Information about subcontracting

The contract/lot/concession is likely to be subcontracted

Section VI. Complementary information

VI.4) Procedures for review

VI.4.1) Review body

NPL Management Ltd

Hampton Road

Teddington

TW11 0LW

Country

United Kingdom

VI.4.2) Body responsible for mediation procedures

NPL Management Ltd

Hampton Road

Teddington

TW11 0LW

Country

United Kingdom