

Corrigendum

**Notice Inviting Open Tender for:
Supply, Installation, Commissioning & Training of a High-resolution Field Emission SEM with
optional dual large EDS detector and mineral/resource mapping facility at the Indian Institute
of Science, Bangalore**

(Tender from Domestic Vendor and Suppliers)

Bids are invited from domestic OEM / authorized distributor of domestic OEM

(Last date of Submission May 16, 2023)

Date: May 13, 2023

Please take note of the modifications in the technical specifications part of this tender published on May 3, 2023.

The specification in the Tender posted on May 3, 2023

Features	Specification
Resolution	0.7nm or better @ 15 kV in high vacuum 1.1nm or better @ 500V in high vacuum

is modified to

Features	Specification
Resolution	0.7nm or better @ 15 kV in high vacuum 0.9 nm or better @ 1 kV in high vacuum

The specification in the Tender posted on May 3, 2023

Optional	
<i>All optional items must be quoted separately</i>	
Double EDS integrated system	The state-of-the-art double EDS-SEM integrated system should work on the same user interface. <u>EDS detectors:</u> Should be easily retractable to a safe position when not in use. Peltier cooled silicon drift detector (SDD) with pulse processor, Each active detector window area 30mm ² or larger, energy resolution of 125eV or better at Mn K α . Detection of elements down to Beryllium and quantification from Boron onwards, Robust EDS detector window with Silicon nitride.
	EDS detector – give possible options for single/multiple, minimum total 60 mm ² area and ability to access raw signal by user.

EDS and related Software	<p>Qualitative and quantitative spectrometry for accurate peak identification, background subtraction and automatic peak evaluation</p> <p>Deconvolution of spectra for separate element contributions</p> <p>Quantification software must have options for ZAF and similar corrections.</p> <p>Fast mapping capability on larger samples</p> <p>User interactive qualitative and standardless quantification with K, L, M, N line database. Quantification of elements from Boron in point, LineScan, Mapping. Real time elemental mapping with auto elemental identification, quantification based on ZAF or similar correctional algorithms.</p> <p>Quantification of phases.</p> <p>Spectral imaging with up to 4096x4096 pixel resolution, online deconvolution and pseudocolor mapping.</p> <p>Storing of spectra at each point during mapping for online and offline analysis (1 offline license).</p> <p>Display of quantitative results as atomic and weight percentage. Color-coded concentration distributions (element maps, phase maps) for any number of elements within an arbitrary field of view.</p> <p>Mineralogical and resource mapping software with inbuilt capability of mineral identification dataset and mode percentage calculations</p> <p>False colour mapping capability</p> <p>Export of results to Tiff, Jpeg, MS® Word, Excel and pdf.</p>
Calibration standard samples	Standard samples to be provided for SEM-EDS
HAADF/BF detector	pneumatically retractable STEM detector for BF / DF and HAADF imaging
Optional Accessories	Carbon sputter coater with consumables for one year UPS for 1 hour of back up.

is modified to:

Optional	
<i>All optional items must be quoted separately</i>	
Advanced EDS system (dual EDS detectors/ equivalent large area single detector)	<p>The state-of-the-art Advanced EDS system should work on the same user interface.</p> <p>Peltier cooled silicon drift detector (SDD) with pulse processor.</p> <p>For a double EDS detector system, each active detector window area should be 30mm² or larger. For a single detector system, the minimum area should be 100 mm² or larger.</p> <p>The EDS detector system should be robust with window suitable for detecting low Z elements from Boron onwards.</p> <p>Energy resolution of 127 eV or better at Mn Kα.</p>

	<p>Should be automatically retracted to a safe position when not in use, or during plasma cleaning, or sample exchange.</p> <p>(Note: The Institute reserves the right to take a decision based on the relative performance of large area single EDS detector and double detector EDS system)</p>
EDS and related Software	<p>Should offer the ability to access raw signal by user.</p> <p>Qualitative and quantitative spectrum analysis for accurate peak identification, background subtraction and automatic peak evaluation</p> <p>Deconvolution of spectra for separate element contributions</p> <p>Quantification software must have options for ZAF and similar corrections.</p> <p>Fast mapping capability on larger samples</p> <p>User interactive qualitative and standardless quantification with K, L, M, N line database. Quantification of elements from Boron in point, LineScan, Mapping. Real time elemental mapping with auto elemental identification, quantification based on ZAF or similar correctional algorithms.</p> <p>Quantification of phases.</p> <p>Spectral imaging with up to 4096x4096 pixel resolution, online deconvolution and pseudocolor mapping.</p> <p>Storage of spectra at each point during mapping for online and offline analysis (1 offline license).</p> <p>Display of quantitative results as atomic and weight percentage. Color-coded concentration distributions (element maps, phase maps) for any number of elements within an arbitrary field of view.</p> <p>Mineralogical and resource mapping software with inbuilt capability of mineral identification dataset and mode percentage calculations</p> <p>False colour mapping capability</p> <p>Export of results to Tiff, Jpeg, MS® Word, Excel and pdf.</p>
Calibration standard samples	Standard samples to be provided for SEM-EDS
Warranty of EDS system	Warranty (from the date of full installation and acceptance) for 5 years along with free software upgrades to be included along with the origin SEM warranty.
STEM detector	pneumatically retractable STEM detector for BF / DF and HAADF imaging
EBSD - TKD detectors with data analysis softwares	<p>pneumatically retractable EBSD detectors. It should be fully integrated with the EDS attachment and should work on the same interface.</p> <p>EBSD-TKD sample holder (70 degree pretilted sample holder for EBSD 2 number and suitable holder for TKD).</p> <p>Camera Speed: 2000 or higher indexed patterns per second on Ni standard at beam currents of > 2 nA, Motorized, high-precision camera slide, Touch sensor for collision prevention, Integrated Real (not virtual) Forward Scatter Detector, SEM interface for camera should contain standard features.</p> <p>EBSD-TKD data analysis software (with 3 offline licenses) should include state of the art features for grain size, phase, orientation, mis-orientation</p>

	and texture analysis. Should have suitable materials databases for metals, alloys, intermetallics, ceramics and polymers. Exportofresults toMS® Word,Excel and pdf.
Calibration standard samples	Standard samples to be provided for EBSD-TKD
Warranty of EBSD-TKD	Warranty of EBSD-TKD (from the date of full installation and acceptance)for5 years along with free software upgrades to be included along with the origin SEM warranty
Optional Accessories	Carbon sputter coater with consumables for one year UPS for 1 hour of back up.

NOTE / Pre-Qualification criteria (published on May 3, 2023)

(C) The company should be original equipment manufacturers (OEMs) of the FESEM-EDS-Mineral/resource software systems. Please attach exclusive authorization certificate(s) specific for this tender with quote without which bid will be rejected.

is modified to

(C) The company should be original equipment manufacturers (OEMs) of the FESEM, EDS, EBSD, Mineral/resource software systems. Please attach exclusive authorization certificate(s) specific for this tender with quote without which bid will be rejected.