Tender Notice

Request for Proposal – Raman Spectrometer System

(RFP-IITD AD-PD 26/039)

Indian Institute of Delhi–Abu Dhabi seeks to procure a high-performance research-grade Confocal **Raman Microscope System** for its Central Analytics Facility to support advanced research, innovation, and teaching activities across Chemical Engineering, Materials Science, Chemistry, Physics, Semiconductor Engineering, Environmental Engineering, Energy Systems, and related disciplines.

Brief Project Scope:

Project Overview	IIT Delhi–Abu Dhabi seeks to procure a high-performance research-grade Confocal Raman Microscope System for its Central Analytics Facility to support advanced research, innovation, and teaching activities across Chemical Engineering, Materials Science, Chemistry, Physics, Semiconductor Engineering, Environmental Engineering, Energy Systems, and related disciplines. The proposed system shall enable non-destructive chemical, structural, and spatial characterization of liquids, powders, catalysts, photocatalysts, semiconductors, thin films, polymers, carbon materials, biological samples, optical materials, and environmental contaminants. The system shall provide high-sensitivity Raman spectroscopy, confocal Raman microscopy, hyperspectral Raman imaging, and three-dimensional chemical mapping capabilities for advanced research applications. The instrument shall provide high spectral resolution, automated multi laser operation, confocal imaging, rapid Raman mapping, advanced chemometric analysis, and compatibility within situ and operando accessories. The system will function as a shared central research facility supporting interdisciplinary research and academic training. The system is expected to support ongoing and future research programs in: • Heterogeneous catalysis and catalyst characterization • Carbon capture, utilization, and storage (CCUS) materials • Electrochemical CO_2 conversion and energy storage materials • Photocatalysis and solar fuels • Semiconductor and photonic materials • Two-dimensional materials and nanomaterials • Polymers, composites, and advanced manufacturing • Environmental monitoring and microplastic detection • Surface-enhanced Raman spectroscopy (SERS) applications • Operando and in situ reaction studies
Objectives	• Procure a research-grade confocal Raman microscope system capable of high-resolution Raman spectroscopy and Raman imaging.

	• Support research and teaching activities in catalysis, carbon capture, semiconductors, materials science, environmental science, polymers, nanotechnology, and energy materials. • Enable non-destructive characterization of molecular structure, chemical composition, phase distribution, crystallinity, and defects. • Support advanced Raman imaging, hyperspectral mapping, and three-dimensional chemical visualization. • Enable operando and in situ measurements using environmental cells, heating stages, electrochemical cells, and reaction chambers. • Establish a high-performance analytical platform supporting undergraduate, postgraduate, doctoral, and postdoctoral research activities. • Enable hands-on training in modern spectroscopic characterization methods, instrumentation, analytical workflows, and data interpretation. • Facilitate industrial collaboration, consultancy projects, contract research, and sponsored research programs requiring advanced chemical characterization. • Provide a future-expandable platform capable of accommodating additional laser wavelengths, detectors, AFM-Raman integration, TERS, and advanced imaging technologies. • Establish a shared institutional facility supporting interdisciplinary research and collaborative projects.
Scope	The procurement includes supply, installation, commissioning, calibration, training, warranty support, and after-sales maintenance of a complete research-grade Confocal Raman Microscope System. The scope shall include, but not be limited to: • Research-grade confocal Raman microscope and spectrometer platform • High-performance imaging spectrograph suitable for UV, Visible, and NIR Raman measurements • Deep-cooled CCD detector and associated detector control electronics • Multiple laser excitation sources with automatic switching and alignment • Automated Rayleigh rejection filters and optical path switching • Research-grade optical microscope with motorized components • High-precision motorized XYZ encoded stage for Raman mapping and imaging • Single-point, line-scan, area-mapping, and three-dimensional Raman imaging capabilities • Integrated autofocus and sample navigation functionality • Advanced chemometric and multivariate data analysis software • Raman spectral databases and material identification tools where applicable • Sample holders for solid, powder, liquid, thin-film, and semiconductor samples • Integrated calibration and wavelength verification systems • Computer workstation with licensed acquisition and analysis software • Laser safety accessories, interlocks, and enclosure systems • Installation, commissioning, validation, and user training • Minimum 36-month comprehensive warranty

	• Availability of spare parts and technical support for a minimum period of ten (10) years **Optional pricing schedules may be requested for:** • Additional laser wavelengths • Low-frequency Raman modules • Deep UV (DUV) Raman capability • Near UV (NUV) Raman capability • Extended NIR Raman capability • EMCCD or advanced detector upgrades • AFM-Raman and TERS compatibility • Environmental chambers, heating stages, and cryogenic stages • Electrochemical and operando reaction cells • Additional software modules and user licenses • Extended warranty and annual maintenance contracts

Confidentiality & NDA Requirement

The detailed RFP documents contain confidential information. Interested suppliers must download, complete, sign, and submit the **Non-Disclosure Agreement (NDA)** as an **Expression of Interest (EOI)**.

EOI / NDA Submission Deadline:
20th July 2026, 3:00 PM (UAE Time)

Signed NDAs should be submitted to: **procurement@iitdabudhabi.ac.ae**
Upon receipt of a duly signed NDA, eligible suppliers will receive the complete RFP package.

Key Procurement Milestones

Milestone	**Date**
NDA Publication / RFP Launch	Wednesday 15th July 2026
EOI & Signed NDA Submission Deadline	Monday 20th July 2026, 3:00 PM
RFP Document Release	Tuesday 21st July 2026
Clarification Questions Deadline	Thursday 23rd July 2026, 3:00 PM
Clarification Responses Issued	Monday 27th July 2026
Proposal Submission Deadline	**Monday 3rd August 2026, 3:00 PM**
Intent to Award	Mid- August 2026

For further information, please contact **procurement@iitdabudhabi.ac.ae**.