

APPROVED
at the Procurement Commission meeting
May 22, 2012
Minutes No. LU CFI 2012/15_1

Open Tender of the
Institute of Solid State Physics University of Latvia

“*Delivery of FTIR Spectrometry System with
Microscope and Closed Cycle Helium Cryostat*”

REGULATION

Procurement ID No.: LU CFI 2012/15/ERDF

Procurement will be performed within the ERDF Project
“Development of Scientific Infrastructure for the National Research
Centre of Nanostructured and Multifunctional Materials,
Constructions and Technologies”
(Project No.: 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004)

Riga, 2012

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I GENERAL INFORMATION

1.1. Procurement Identification Number: **LU CFI 2012/15/ERDF**

1.2. Contracting Authority

Name	Institute of Solid State Physics University of Latvia (hereinafter - the ISSP)
Address	Kengaraga street 8, Riga, LV-1063, Latvia
VAT Reg. No.	LV90002124925
Telephone	+371 67187816
Fax	+371 67132778
e-mail	ISSP@cfi.lu.lv
Internet address	www.cfi.lu.lv
Contact person	Janis Pinnis, Secretary of the Procurement Commission
Telephone	+371 67260545
Fax	+371 67132778
e-mail	Janis.Pinnis@cfi.lu.lv
Working hours	8:30-17:00

1.3. Subject of the procurement –

Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat, 1 set.

CPV reference number: 38430000-8.

1.4. **The place of the Contract performance:** the premises of the ISSP, Kengaraga street 8, Riga, Latvia.

1.5. Schedule

Activity	Date	Time**
Requests for additional information regarding the Regulation shall be submitted by*	*	
Deadline for providing clarifications to the interested persons	03.07.2012	
Deadline for the submission of bids	09.07.2012	14:00
Meeting of Bids opening	09.07.2012	14:00
Sending a notice of tender results	16.07.2012 (tentative)	
Entering into the Contract	30.07.2012 (tentative)	
Time of delivery	no more than 5 (five) months since entering into the Contract	

* Request is deemed to be submitted if written request is received from the Tenderer (a letter, fax or e-mail). The requests for additional information in relation to the Regulation should be submitted to the Commission in due time, considering that the Commission is not entitled to furnish additional information later than 6 (six) days prior to the deadline for the submission of bids.

** Latvian time

1.6. The present method of the procurement is an open tender regulated by the Republic of Latvia Law “On Public Procurement”. The Tender is organised by the Procurement Commission (hereinafter - the Commission) of the Institute of Solid State Physics University of Latvia (hereinafter - the ISSP), established by the Director of ISSP Orders No. 1-v dd. 21.01.2011 and No. 3-v dd. 12.01.2012.

II THE TENDER DOCUMENTS AND SUBMISSION AND OPENING OF TENDERS

2.1. The requirements regarding the contents of the Tender documents.

2.1.1 The Tender documents shall comply with the requirements included in the present Regulation and shall comprise the following:

- 1) application for participation in the present Tender to be filled in on the form enclosed as Annex 3.1 to the present Regulation;
- 2) documents certifying the qualifications of the Tenderer (see Section IV herein);
- 3) the Technical Bid, that shall be filled in on the form enclosed as Annex 4 to the present Regulation; the Technical Bid shall be signed;
- 4) the Financial Bid, that shall be filled in on the form of enclosed as Annex 5 to the present Regulation; the Financial Bid shall be signed;
- 5) a bank's letter of intent stating that the bank undertakes to issue the Advance Payment Guarantee to the Tenderer.

The Tender documents shall be permanently bound together in such a way that pages may not be replaced or removed; the pages shall be numbered.

If the Tenderer encloses the promotional materials, brochures, catalogues, etc., which are not bound together, the Tenderer's name shall be indicated on every document enclosed thereto.

2.1.2. The Tender documents shall be drawn up in the Latvian or English language subject to the requirements of the record-keeping, in two paper copies:

- 1) an original (marked “Original”),
- 2) a copy (marked “Copy”),

The Bid shall be annexed with the technical specification in electronic form (CD) in the format of MS Word or MS Excel. The Tenderer's name and the mark “LU CFI 2012/15/ERDF” shall be indicated on the respective CD.

2.2. The place and procedure of submitting the Offer: the Offer shall be submitted to the Secretariat of the ISSP, Room 204, 2nd floor, Kengaraga street 8, Riga, LV-1063. The Offer shall be submitted on business days from 8:30 to 17:00.

The Offer may be sent in a registered letter, by courier service or delivered in person.

Both samples of the Offer shall be submitted (sent) in one closed and sealed envelope. The following information shall be indicated on the envelope:

- 1) Institute of Solid State Physics University of Latvia, Kengaraga street 8, Riga, LV-1063, Latvia.
- 2) The Tenderer's name and address,
- 3) The mark: “For the Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”” (LU CFI 2012/15/ERDF),

2.3. The Offer validity term: 3 (three) months from the day of opening the Offer. The Tender shall not stipulate bid bond.

2.4. The place and date of opening the Offers: The Bids will be opened in the premises of the ISSP: in the Director's office, 2nd floor, Kengaraga street 8, Riga, and will begin on the

date and at the place stated in Item 1.5. The meeting of opening the Offers is open and all the interested persons may participate therein.

2.5. The Tenderer may submit only one Offer. The Offer shall not comprise several versions of the Technical Bid and the Financial Bid.

III INFORMATION ON THE SUBJECT OF THE PROCUREMENT

3.1. The subject of the procurement: Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat, 1 set, in accordance with the requirements stated in the Technical Specifications (enclosed as Annex 1 hereto) and the draft Contract (enclosed as Annex 2 hereto).

3.2. Procurement will be performed within the ERDF Project “Development of Scientific Infrastructure for the National Research Centre of Nanostructured and Multifunctional Materials, Constructions and Technologies”
(Project No.: 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004).

IV THE REQUIREMENTS PUT TO THE TENDERERS AND THE TENDERERS’ SELECTION

4.1. The Contracting Authority shall examine Offers submitted by the Tenderers, who conform to the requirements stipulated by this Section and have been selected in accordance with the procedures indicated in the present Regulation.

4.2. Conditions for Excluding a Tenderer.

A Contracting Authority shall exclude a Tenderer from further participation in a procurement procedure and shall refuse to consider the said Tenderer’s bid if:

4.2.1 the Tenderer has not been registered in accordance with the requirements of laws and regulations;

4.2.2 pursuant to a court judgement or an injunction of a public prosecutor regarding a penalty, which has come into effect and become incontestable, the Tenderer or the Tenderer's official has been found guilty of having links to criminal offences of corruptive character, fraudulent activities in financial matters, laundering of proceeds derived from crime or implication in a criminal organisation (except as provided by Clause 1, Paragraph 4, Section 39 of the Public Procurement Law);

4.2.3 pursuant to a decision made by a competent institution or a court judgement, which has come into effect and become incontestable, the Tenderer has been found guilty of significantly violating the employment rights related to: 1) employment of one or several citizen(s) or subject(s) other than citizens or subjects of the Member States of the European Union, where they stay illegally in the territory of the Member States of the European Union; 2) employment of one person without entering into the employment contract in writing, where such a violation is established repeatedly in the course of a year, or employment of two or several persons without entering into the employment contract in writing (except as provided by Clauses 1 and 2, Paragraph 4, Section 39 of the Public Procurement Law);

4.2.4 pursuant to a decision made by a competent institution or a court judgement, which has come into effect and become incontestable, the Tenderer has been found guilty of violating the competition rights related to the vertical agreement aimed at limiting a buyer's opportunity to fix a resale price or the horizontal cartel agreement except for the case when the respective institution, upon establishing a violation of the competition rights, has exempted the Tenderer from a penalty (except as provided by Clause 3, Paragraph 4, Section 39 of the Public Procurement Law);

4.2.5 an insolvency process of the Tenderer has been declared or the Tenderer's business activity has been suspended or terminated, a case has been brought against the Tenderer to declare it bankrupt or it is established that the Tenderer will be liquidated until the expected expiry date of the agreement performance (the Customer may decide on not excluding the Tenderer from the procurement procedure pursuant to this Paragraph in cases as provided by Paragraph 3, Section 39 of the Public Procurement Law);

4.2.6 the Tenderer has tax arrears, including compulsory social security contribution arrears (exceeding 100 lats in total in each country) in Latvia and in the country, where the Tenderer is registered (where the Tenderer is not registered in Latvia);

4.2.7 the Tenderer has provided false information with respect to its qualifications or has not submitted the required information at all;

4.2.8 as otherwise provided by the Public Procurement Law.

4.3. In order to evaluate a Tenderer in accordance with Item 4.2., the Tenderer shall submit the following information along with the Offer:

4.3.1 a copy of the Tenderer's registration certificate;

4.3.2 a statement by the Tenderer that the circumstances referred to in Paragraphs 4.2.2 – 4.2.6 of the Regulation do not apply to the Tenderer;

4.4. The Contracting Authority shall be entitled to request a Tenderer to submit the following documents within 10 (ten) business days:

4.4.1 a certificate issued by the Republic of Latvia Enterprise Register or an equivalent authority in any other country, where the Tenderer is registered no earlier than one month prior to the submission day to the effect that an insolvency process of the Tenderer has not been declared and that the Tenderer is not undergoing liquidation (in cases as provided by Paragraph 8, Section 39 of the Public Procurement Law);

4.4.2 a certificate issued by the State Revenue Service or the local government in Latvia no earlier than one month prior to the submission day to the effect that the Tenderer (regardless of whether or not the Tenderer is registered in Latvia) has no tax arrears, including social security contribution arrears, exceeding 100 lats in total in Latvia (in cases as provided by Paragraph 8, Section 39 of the Public Procurement Law);

4.4.3 a certificate issued no earlier than one month prior to the submission day to the effect that the Tenderer registered abroad has no tax arrears, including social security contribution arrears, exceeding 100 lats in total in the respective country (in cases as provided by Paragraph 8, Section 39 of the Public Procurement Law);

4.4.4 latest financial statements (including the balance sheet, profit and loss statement, cash flow statement, report on changes in equity and appendices) submitted to the State Revenue Service or an equivalent tax administration authority in any other country by the Tenderer, and the relevant auditors' opinion (if any).

4.5. Information Regarding the Economic and Financial Status of a Tenderer

4.5.1 The economic and financial status of a Tenderer shall comply with the following conditions: the annual average financial turnover of the Tenderer for the last 3 (three) years shall exceed the bid amount.

4.5.2 For the purpose of evaluating the Tenderer's economic and financial status, the Tenderer shall submit the following along with the Offer: a statement regarding the Tenderer's average annual financial turnover during the last 3 (three) years. Tenderer, whose

period of operation is less than 3 (three) years, shall submit a statement regarding the Tenderer’s financial turnover during the period of its operation.

4.6. Information on the Tenderer’s Capabilities

4.6.1 The Tenderer’s capability to delivery the research equipment shall conform to the following terms and conditions:

4.6.1.1 The Tenderer shall have the experience in the delivery of research equipment; the contract sum of at least one contract shall exceed the tender sum;

4.6.1.2 The Tenderer shall have qualified personnel to be employed in the installation of the offered equipment and warranty and post-warranty repair work;

4.6.1.3 The manufacturer of the offered equipment shall have authorised the Tenderer to deliver equipment offered by the Tenderer, install it and perform the technical tests and warranty repair.

4.6.2 For the purposes of evaluating the Tenderer’s capabilities, the Tenderer shall submit the following along with the Offer:

4.6.2.1 A list of the performed main contracts on the delivery of research equipment during the last 3 (three) years pursuant to Annex 3.2 to the Regulation;

4.6.2.2 A list of the Tenderer’s technical personnel to be employed in the installation of the equipment and warranty and post-warranty repair work pursuant to Annex 3.3 to the Regulation;

4.6.2.3 The document issued by the manufacturer of the offered equipment certifying the Tenderer’s rights to deliver the offered equipment during the contract period, install it and perform the technical tests and warranty repair.

4.7. Additional Information

4.7.1 If the information submitted by the Tenderer in accordance with Items 4.3., 4.4., 4.5 and 4.6. of this Regulation, is insufficient to determine whether the conditions referred to in Item 4.2. herein, are applicable to the Tenderer, or in order to evaluate the economic and financial status and capability of the Tenderer, the Contracting Authority shall be entitled to request the Tenderer to explain the information submitted or submit additional information within the scope specified in the above referred Items.

4.7.2 In order to determine whether the cost of a Tender received is unreasonably low, the Contracting Authority can request the Tenderer, who has submitted the Tender with the lowest price, to submit a description of the specific market conditions available only to this Tenderer, that substantiates the price reduction.

4.8. Exclusion from Participation in the Procurement Process

4.8.1 If the conditions referred to in Item 4.2. herein, apply to the Tenderer or the Tenderer’s economic and financial status and capabilities do not conform to the conditions of Item 4.5. and Item 4.6. herein, the Contracting Authority shall take a decision not to examine the Tenderer’s Bid and to exclude the Tenderer from further participation in the procurement procedure.

4.8.2 If a Tenderer has submitted a Tender of unreasonably low cost, the Contracting Authority shall exclude the Tenderer from further participation in the procurement process.

4.8.3 If a Tenderer requests the Contracting Authority to explain the decision that has been taken in accordance with Item 4.8.1 and Item 4.8.2 herein, the Contracting Authority shall,

within a period of three days from the receipt of the request, provide a written substantiation of the decision.

V EVALUATION OF THE TENDERS AND THE REQUIREMENTS SET FOR THE TENDERERS

5.1. The submitted Offers that have passed the qualification test (Tenderer`s selection; Section IV) and conform to the requested technical specification (Annex 1) shall be evaluated according to the sole criterion – **the lowest price. The prices in lats (LVL), VAT excluded, will be compared.** The price set in euros, USD or GBP will be converted in lats according to the exchange rate fixed by the Bank of Latvia on the day of opening the bids.

5.2. The winner of the competition shall be acknowledged the Tenderer who has submitted the Offer with the lowest price, which is determined by taking into consideration Item 5.1 herein.

5.3 Requirements put to the Tenderers

5.3.1 The Tenderer shall provide for the permanence of the price tendered at the Tender during the entire compliance with the Procurement Contract. The potential inflation, alteration of the market conditions or any other conditions shall not be the basis for the increase of the prices and the consequences caused by the above processes shall be projected and estimated by the Tenderer when compiling the Financial Bid.

VI RIGHTS AND OBLIGATIONS OF THE COMMISSION

6.1. The Offer shall be evaluated and the selected Tenderer shall be determined by the Commission established subject to the instructions by the Director of the Institute of Solid State Physics University of Latvia.

6.2. The Commission shall have the rights to decline a further evaluation of any Offer, if it is identified that the Offer is incompliant with any requirement stipulated by the present Regulation or the regulatory enactments of the Republic of Latvia, or contains false information.

6.3. If the Commission shall have doubts about the authenticity of the submitted copy of the document, it shall request the Tenderer to present the original document or submit a verified copy of the document.

6.4. The Commission shall be entitled to invite specialists or experts with advisory rights for the performance of its work. An expert shall provide a written evaluation. The evaluation shall be enclosed to the Minutes of the Commission meeting. The expert`s evaluation shall not be binding on the Commission.

6.5. The Commission may make amendments to the Regulation or extend the term for submission of the Tender. Such information shall be published on the Contracting Authority`s website (www.cfi.lu.lv/iepirkumi).

6.6. If the information of the documents submitted by the Tenderer is insufficient, the Commission may request an additional information, thereby stipulating the term and place for the submission of an additional information.

6.7. If the Tenderer fails to submit the information or clarifications requested by the Commission, the Commission shall evaluate the Tender according to the documents included in the Tender.

6.8. The Commission shall reserve the rights to terminate the procedure without selecting any Tender.

6.9. After the performance of all the checks, thereby applying the criteria of the Offer evaluation and the comparison indicated in Section V, the Commission shall have the right to take one of the following decisions:

- to enter into the Procurement Contract with the Tenderer;
- to terminate the Tender without selecting any Bid;

6.10. The Commission shall publish its decision (Item 6.9) on the Contracting Authority's website (www.cfi.lu.lv/iepirkumi) and send a written notification of its decision to all Tenderers and Procurement Monitoring Bureau within three business days.

6.11. If the Procurement Monitoring Bureau or the Contracting Authority receives no complaint from the Tenderer about the activities of the Contracting Authority with respect to the legality of the Tender within 11 (eleven) days from the day of publishing the notification about the decision-taking on the Procurement Monitoring Bureau's website, the Contracting Authority shall enter into the Procurement Contract with the selected Tenderer.

VII RIGHTS AND OBLIGATIONS OF THE TENDERERS

7.1. The participation in the Tender shall be the Tenderer's free will.

7.2. Submitting the Offer for participation in the Tender, the Tenderer shall accept in full and shall be prepared to comply with the requirements of the present Regulation and the regulatory enactments on the state or local government procurement.

7.3. The Tenderer shall have the rights to appeal against the decision taken by the Commission subject to the procedure stipulated by the Law “On Public Procurement”.

7.4. The Tenderer may change or withdraw the Offer after its submission on condition that the Tenderer submits a written notification about the changes (or withdrawal) until the expiry of the Offer submission term.

7.5. The Offers shall not be amended or supplemented after the expiry of the Offer submission term.

VIII CONTRACT CONDITIONS

8.1. The aim of entering into a contract shall be the stipulation of all the legal, property, financial and other relationship that may arise upon the performance of the procurement for the needs of the Contracting Authority.

8.2. The draft Procurement Contract is enclosed in Annex 2 herein.

8.3. If the Tenderer fails to conclude the Procurement Contract during the Offer validity term, he/she is deemed to have waived the compliance with the procurement, and the Procurement Contract shall be concluded with the next most favourable Tenderer.

ANNEX 1

to the Regulation of the Open Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat” (LU CFI 2012/15/ERDF)

TECHNICAL SPECIFICATIONS

No.	Contracting Authority’s requirements	
1.	General requirements	
1.1	Undefined requirements	Where any technical requirement referring to the present Contract is not defined in the Technical Specifications, it shall comply with the minimum generally accepted requirements or standards.
1.2	Technical condition of equipment to be delivered	The equipment to be delivered shall not be previously used, the used or the renovated parts shall not be built therein
2.	FT-IR Spectrometer	
2.1	System description	FTIR spectrometry system with microscope capable to deliver high quality data in MIR and FIR ranges.
2.2	Spectral range	MIR range not less than 10,000 to 380 cm ⁻¹
2.3		FIR Range not less than 680 to 10 cm ⁻¹
2.4		Beamsplitters needed for described spectral ranges should be provided. At least two internal storage positions should be available in the housing of the spectrometer.
2.5	Evacuation	The interferometer and sample chambers must be separately evacuable in order that the sample compartment may be brought up to atmospheric pressure without losing vacuum in the interferometer and detector chambers.
2.6	Sensitivity	The minimum signal to noise for a 5 second (5 sec sample and 5 sec reference) 100% line measurement should exceed 9500:1 peak-to-peak (or < 4,7 x 10 ⁻⁵ AU noise) using the following conditions. 4 cm ⁻¹ spectral resolution Blackman Harris 3-Term apodization DTGS detector, KBr beam-splitter and air cooled source Noise calculated as peak-to-peak between 2200 to 2100 cm ⁻¹ Average value calculated from values for 10 consecutive measurements.
2.7	Resolution	The instrument spectral resolution should be continuously variable to a maximum of at least 0.2 cm ⁻¹ (apodized) and should be upgradeable to better than 0.06 cm ⁻¹ resolution (apodized).
2.8	ADC	The spectrometer must be FULLY digital, with the ADC converter integrated with the detector preamplifier. Partly analog spectrometers are not acceptable due to possible noise pickup and degradation of the analog signal along the signal path from the detector to the ADC.

2.9		The systems A/D converter must have a 24 bit dynamic range for accurate representation of spectra and best signal to noise. Gain switching schemes to achieve higher dynamic range are not acceptable, due to generation of artefacts in the data.
2.10	Aperture	The instrument should include a software controlled aperture wheel with 12 positions ranging from 0.25 up to 8 mm for optimization of throughput. An iris-aperture is not acceptable, due to lack of reproducibility.
2.11	Performance control	Spectrometer components such as source, laser, detector, interferometer and automation units must be continuously monitored for operation within factory specifications. The operator must be immediately notified by system software if any of the factory specifications are not met. The software must offer detailed information about the nature of the failure and suggest possible remedies.
2.12	Accessory recognition	Optical components such as detector, source and beamsplitter must be electronically coded, so that these components are automatically recognized when placed in the spectrometer or removed. Appropriate acquisition parameters must be automatically set in the software.
2.13	Sample compartment	The main sample compartment should have a center focus to accommodate the complete range of commercially available accessories and large customized accessories. The sample compartment should measure not less than 24 cm (wide) by 25 cm (deep) by 15 cm (high). The sample compartment cover should be easily removable without the use of tools. Automatic sample compartment shutters must be provided.
2.14	Accessory mount	The sample compartment must be equipped with mechanical lock mechanism for quick, secure and reproducible positioning of sampling accessories. The change of accessories must be possible without using any tools.
2.15	Interferometer	The interferometer must be True-Aligned, with active alignment inside the scanning arm of the interferometer. The active True-Alignment must be fast enough to maintain alignment of the interferometer during the scan. Dynamic alignment of the fixed mirror of the interferometer is not acceptable, because while it can serve to optimize the spectral resolution of an FTIR spectrometer, in some cases it may move the output beam relative to the detector enough to reduce system stability and create spectral artifacts
2.16		The interferometer should be capable of acquiring data in both scanning directions to ensure the maximum signal-to-noise ratio in the shortest possible time.
2.17		The interferometer bearing mechanism must be wear-free (frictionless) design to ensure unlimited lifetime. Bearings that wear over time are not acceptable because they result in downtime, require frequent maintenance and costly repair.
2.18	Sources	The sources must be easily user replaceable and must be easily accessible.

2.19		High power Hg-arc plasma source for the very far IR spectral range must be provided.
2.20		NIR source and switching mechanism controlled by means of software between sources must be provided.
2.21	Detectors	The detectors must be easily user changeable, with exactly reproducible positioning and a security lock.
2.22	Validation	The system must incorporate an automated internal instrument validation unit. The internal validation unit must be able to incorporate 5 different validation standards and be fully software controlled. The unit must have validation standards to test for instrument wavelength (X-axis) and photometric (Y-axis) accuracy and precision. This instrument validation must not require user interaction and must produce a report documenting the results of the validation tests.
2.23	Spectrum display	The spectrometer must provide real time display of the infrared spectrum.
2.24	Diagnostics	The system must offer remote diagnostics
2.25	Input beams	Optical bench must support up to 2 computer controlled input beams accessible from the right and rear side of the spectrometer optics. The right side input beam must pass through both the internal aperture and validation wheels.
2.26	Vacuum pump	The spectrometer must include an oil-free vacuum pump with a capacity of 14 m ³ /h
2.27	Power	The system must have a broad range power supply with the following specifications for world-wide operation: 100 - 240 VAC, 50 - 60 Hz, typically 700 W including vacuum pump (without PC-data system).
2.28	Upgradeability	The instrument should have an external sample compartment option available.
3.		FTIR Microscope
3.1	Spectral range	10,000 – 450 cm ⁻¹
3.2	Spectral resolution	Not less than for FTIR spectrometer.
3.3	Power	230V ± 10%; 250 VA
3.4	Adjustment accuracy	Manual and motorized stage accuracy to better than ± 1µm. The focus should be manual to allow for fine focus to the diffraction limit. The autofocus option attaches externally to the focus knob to allow software control of the focus without sacrificing fine focus control.
3.5	Visible mode	Microscope should be equipped for visual observation of the samples. Should be possible to use visible polarizers to enhance the contrast within a sample. In addition should be possible to operate in the VIS/IR mode allowing simultaneous visual observation and spectral analysis of the sample
3.6	Working distance	not less than 24 mm with the standard 15x objective

3.7	Detector	MCT broad band, liquid N ₂ cooled, 0.25mm x 0.25mm spectral range: 10,000-450 cm ⁻¹ , D* _s ≥ 5 x 10 ⁹ cm Hz ^{1/2} /W, Hold time typically 8 h.
3.8	Sensitivity	Or in order to establish that the proposed system can perform for difficult samples, the system should be able to meet or exceed the following signal-to-noise specification: SNR > 6,500:1 under the following conditions: 100 micron aperture Transmission mode, 15x objective 4 cm ⁻¹ resolution 2 minute background measurement 2 minute sample measurement peak-to-peak noise measured from 2200 - 2000 cm ⁻¹ triangular apodization Mid-band MCT detector
3.9	Objectives	Not less than 15x magnification (better than 0.4 N/A) and 36x magnification (better than 0.5 N/A) objectives for transmission and reflection measurements should be provided.
3.10	LCD monitor	Microscope should have integrated high resolution colour LCD monitor for IR sample observation.
4.		Closed Cycle Helium Cryostat for FTIR Spectrometer
4.1	Technical description	Closed Cycle Helium Cryostat complete with helium compressor. Sample temperature: 10 K to room temperature. Ultra Low Vibrations Cryostat specially manufactured for FTIR Spectrometer. 3-samples system with Z-translator. He cryostat temperature controller.
5.		Software and PC workstation
5.1	Software	Software for FTIR and microscope control as well as data collection and analysis should be provided together with the instruments. The operating software must be validated.
5.2		Must be GLP compliant. Must be fully compliant with 21 CFR part 11 regulations of United States FDA. Must be "all-in-one" software for data measurement, manipulation and evaluation. Must include an optical beam path interface to select the available optical components and input/output beam options automatically by a mouse click.
5.3	PC workstation	Computer for work and control of both instruments should be provided. It should comply with minimal needed requirements of the manufacturer's suggestions. Should as well include at least 1 (one) TFT monitor and laser printer.
6.		Warranty and post warranty works

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“Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”

6.1	Warranty	Manufacturer’s warranty for parts and works not less than 2 (two) years should be provided.
6.2	Post warranty works	The supplier of the instrument shall to be capable to provide post warranty works for additional charge (which shall not be included in the financial bid) for at least 5 (five) years.
7.		Delivery and installation
7.1	Delivery and installation costs	Delivery and installation costs should be included in the offer of the spectrometer.
7.2	Delivery time	Delivery and installation of the spectrometer and microscope should be done in 5 (five) months by latest.

Tender Regulation for the Procurement No.LU CFI 2012/15/ERDF
 “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”

<p>Pielikums Nr.2</p> <p>atklāta konkursa nolikumam „Furjē transformācijas infrasarkanās spektrometrijas (FT-IR) sistēmas ar mikroskopu un hēlija kriostatu piegāde”</p> <p>Iepirkums Nr.: LU CFI 2012/15/ERAF</p>	<p style="text-align: right;">ANNEX 2</p> <p style="text-align: center;">to the Regulation of the Open Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”</p> <p style="text-align: center;">Procurement No.: LU CFI 2012/15/ERDF</p>
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LĪGUMS (projekts)	CONTRACT (draft)
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<p>Rīgā, 2012. gada __. _____</p> <p>LU Cietvielu fizikas institūta līgumu uzskaites Nr. 2012/15/ERAF</p>	<p>Rīga, _____ 2012.</p> <p>Institute of Solid State Physics University of Latvia Contract registration No. 2012/15/ERDF</p>
<p>Latvijas Universitātes aģentūra – Latvijas Universitātes Cietvielu fizikas institūts (turpmāk tekstā – LU CFI), turpmāk tekstā – Pircējs, tā direktora Andra Šternberga personā, kas rīkojas saskaņā ar LU CFI nolikumu, no vienas puses,</p> <p>un _____, turpmāk tekstā – Pārdevējs, tās _____ personā, kas rīkojas saskaņā ar tās statūtiem, no otras puses,</p> <p>abi kopā turpmāk tekstā – Puses un katrs atsevišķi turpmāk tekstā arī Puse,</p> <p>pamatojoties uz Pārdevēja piedāvājumu un Pircēja iepirkumu komisijas lēmumu par atklāta konkursa LU CFI 2012/15/ERAF „Furjē transformācijas infrasarkanās spektrometrijas (FT-IR) sistēmas ar mikroskopu un hēlija kriostatu piegāde” rezultātiem,</p> <p>ERAF līdzfinansēta projekta „Nanostrukturēto un daudzfunkcionālo materiālu, konstrukciju un tehnoloģiju Valsts nozīmes pētniecības centra zinātniskās infrastruktūras attīstīšana” (projekta Nr. 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004) izpildei</p> <p>noslēdz šādu līgumu, turpmāk tekstā saukts Līgums:</p>	<p>Institute of Solid State Physics University of Latvia (hereinafter – the ISSP), hereinafter – the Purchaser, in the person of Mr. Andris Sternbergs, its Director, acting pursuant to the Regulation of the ISSP on the one side,</p> <p>and _____, hereinafter – the Seller, in the person of _____, its _____, acting pursuant to the Articles of Association, on the other side,</p> <p>both hereinafter referred to as the Parties; each separately hereinafter referred to as the Party,</p> <p>on the basis of the Seller’s offer and decision by the Procurement Commission of the Purchaser on the Open Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat” (LU CFI 2012/15/ERDF)</p> <p>for fulfilment of the ERDF Project No.: 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004 “Development of Scientific Infrastructure for the National Research Centre of Nanostructured and Multifunctional Materials, Constructions and Technologies”</p> <p>shall conclude the following contract, hereinafter – the Contract:</p>
<p>1. LĪGUMA PRIEKŠMETS</p>	<p>1. SUBJECT OF THE CONTRACT</p>

<p>1.1. Pārdevējs pārdod, bet Pircējs pērk zinātnisku iekārtu: Furjē transformācijas infrasarkanās spektrometrijas (FT-IR) sistēmu ar mikroskopu un hēlija kriostatu, kuras tehniskā specifikācija norādīta šā līguma pielikumā Nr.1. (turpmāk tekstā - Prece).</p>	<p>1.1. The Seller shall sell and the Purchaser shall buy the research equipment: the FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat, the technical specification of which has been indicated in Annex 1 herein (hereinafter - the Goods).</p>
<p>1.2. Līguma summa, ieskaitot visus ar līguma izpildi saistītos izdevumus un nodokļus ir Ls _____ (_____), turpmāk šā līguma tekstā saukta Līgumcena.</p>	<p>1.2. The Contract price is _____ (_____), including all the expenses, taxes and duties related to the performance with the Contract, excluding VAT.</p>
<p>2. PIEGĀDES IZPILDES - PIENĒMŠANAS NOSACĪJUMI UN APMAKSAS KĀRTĪBA</p>	<p>2. CONDITIONS OF THE PERFORMANCE AND APPROVAL OF THE DELIVERY AND THE PROCEDURE OF PAYMENT</p>
<p>2.1. Prece Pircējam tiek piegādāta Ķengaraga ielā 8, Rīgā, Latvijā, LU Cietvielu fizikas institūta telpās.</p>	<p>2.1. The Goods shall be delivered to the Purchaser at the address: Kengaraga street 8, Riga, Latvia, the premises of the ISSP.</p>
<p>2.2. Saskaņā ar Līgumu piegādājamā Prece tiek nodota Pircējam pieņemšanas – nodošanas akta abpusējas parakstīšanas dienā, ne vēlāk kā 2012.gada ____.</p>	<p>2.2. Pursuant to the Contract, the Goods to be delivered are deemed to be delivered to the Purchaser on the day of the mutual signing of the Deed of Transfer, no later than on _____ 2012.</p>
<p>2.3. Pircējs veic avansa maksājumu Ls _____ (_____) jeb 50% apmērā no Līgumcenas 10 (desmit) darba dienu laikā pēc Līguma abpusējas parakstīšanas un avansa rēķina saņemšanas. Atlikušo Līguma summas daļu Ls _____ (_____) jeb 50% no līgumcenas Pircējs apņemas apmaksāt 10 (desmit) darba dienu laikā, skaitot no abpusēji parakstīta pieņemšanas – nodošanas akta parakstīšanas dienas.</p>	<p>2.3. The Purchaser shall make a prepayment in the amount of _____ (_____) or 50% of the Contract price within 10 (ten) working days from mutual signing of the Contract and receiving the advance payment invoice. The Purchaser hereby undertakes to make the payment of the remaining 50% of Contract price _____ (_____) within 10 (ten) working days from the day of the mutual signing of the Deed of Transfer and receiving the invoice.</p>
<p>3. LĪGUMSLĒDZĒJU PUŠU ATBILDĪBA</p>	<p>3. LIABILITY OF THE CONTRACTING PARTIES</p>
<p>3.1. Līdz piegādātās Preces pilnas apmaksas izdarīšanai, piegādātā Prece ir Pārdevēja īpašums.</p> <p>Preces nejaušas bojāejas (bojājuma) risku sākot ar brīdi, kad Prece ir nogādāta Pircēja telpās, uzņemas Pircējs.</p> <p>Īpašumtiesības uz piegādāto Preci pāriet Pircējam ar brīdi, kad Pircēja banka akceptējusi maksājuma uzdevumu par piegādājamās Preces apmaksu.</p>	<p>3.1. The delivered Goods shall be the property of the Seller until making full payment for the delivered Goods.</p> <p>The risk for an unintentional destruction (damage) of the Goods shall be assumed by the Purchaser from the moment of delivery of the Goods to the premises of the Purchaser.</p> <p>The ownership rights to the Goods shall be transferred to Purchaser from the moment the Purchaser's bank has approved the payment order on the payment for the delivered Goods.</p>

<p>3.2. Par apmaksas termiņa neievērošanu Pircējs, pēc Pārdevēja pirmā pieprasījuma, maksā Pārdevējam līgumsodu 0,1% (procenta vienas desmitdaļas) apmērā no nokavētā maksājuma summas par katru nokavēto dienu, bet ne vairāk kā 10% (desmit procentus) no nokavētā maksājuma summas. Nokavējuma procentu samaksa neatbrīvo no Līguma saistību izpildes.</p>	<p>3.2. For the failure to comply with the payment term the Purchaser, upon the first request by the Seller, shall pay the contractual penalty to the Seller in the amount of 0.1% (one-tenths of one percent) from the sum of the delayed payment for each delayed day, but no more than 10% (ten percent) of the delayed payment. The payment of the contractual penalty shall not free from the compliance with the Contract commitments.</p>
<p>3.3. Par Preces piegādes kavējumu Pārdevējs, pēc Pircēja pirmā pieprasījuma, maksā Pircējam līgumsodu 0,1% (procenta vienas desmitdaļas) apmērā no līgumsummas par katru nokavēto dienu, bet ne vairāk kā 10% (desmit procentus) no Līguma summas.</p> <p>Līgumsoda samaksa neatbrīvo no Līguma saistību izpildes.</p>	<p>3.3. For the delay of the delivery of the Goods the Seller, upon the first request by the Purchaser, shall pay the contractual penalty to the Purchaser in the amount of 0.1% (one-tenths of one percent) from the Contract price for each delayed day, but no more than 10% of the Contract price.</p> <p>The payment of the contractual penalty shall not free from the compliance with the Contract obligations.</p>
<p>3.4. Katra līgumslēdzēja Puse atbild par Līguma neizpildi vai nepienācīgu izpildi, ja tās vainas dēļ nodarīts kaitējums otrai līgumslēdzēja Pusei.</p>	<p>3.4. Every Contracting Party shall be liable for the failure to comply with the Contract or for inadequate compliance, if the detriment is thus caused to the other Contracting Party.</p>
<p>3.5. Neviena no šā noslēgtā Līguma Pusēm nav tiesīga nodot savas tiesības, kas saistītas ar šo Līgumu trešajām personām bez otras Puses piekrišanas. Puses ir tiesīgas rīkoties caur saviem pārstāvjiem.</p>	<p>3.5. None of the Parties to the concluded present Contract shall be entitled to transfer its rights, related to the present Contract, to the third parties without the other Party's consent. The Parties shall be entitled to act through their representatives.</p>

<p>3.6. Pārdevējs atbild par Pircējam piegādātās Preces kvalitāti, kādu noteicis attiecīgo preču ražotājs saskaņā ar Pārdevēja izsniegto garantijas sertifikātu. Preces garantijas remonts ir jāveic atbilstoši vispārpieņemtajai praksei šādām Precēm.</p> <p>Preces bojājumus Pircējs piesaka rakstiski pa faksu _____ vai ziņojot uz e-pasta adresi _____. Paralēli informācijas nodošanai var izmantot tālr. _____.</p> <p>Pārdevējs rakstiski pa faksu _____ vai e-pastu _____ apstiprina pieteikuma par Preces bojājumu saņemšanu.</p> <p>Pārdevēja reakcijas laiks (laiks no Preces bojājuma pieteikšanas līdz Pārdevēja speciālista ierašanās pie Pircēja brīdīm) ir ne vairāk kā 5 (piecas) darba. Pretējā gadījumā Pārdevējs, pēc Pircēja pirmā pieprasījuma, maksā Pircējam sodu par līguma saistību nepildīšanu Ls 100 par katru reakcijas kavējuma darba dienu.</p> <p>Ja bojājumu neizdodas novērst 3 (trīs) mēnešu laikā, tad nākamo 3 (trīs) mēnešu laikā Pārdevējs piegādā jaunu ekvivalentu iekārtu. Ja 3 (trīs) mēnešos nav piegādāta aizvietojošā iekārta, tad nākamā 1 (viena) mēneša laikā Pārdevējs atgriež Pircējam summu iekārtas iegādes vērtībā.</p>	<p>3.6. The Seller shall be liable to the Purchaser for the quality of the delivered Goods, stated by the manufacturer of the respective Goods subject to the warranty certificate issued by the Seller. The warranty repair of the Goods shall be made subject to the common practice for the respective Goods.</p> <p>The Purchaser shall notify of the damaged Goods in writing by fax _____ or by sending an e-mail message to the address: _____. Information may at the same time be provided by telephone _____.</p> <p>The Seller shall confirm the receipt of the notification of the damaged Goods in writing by fax or e-mail.</p> <p>The Seller's reaction (the time from the notification of the damaged Goods until the arrival of the Seller's expert at the Purchaser's location) shall not exceed 5 (five) business days. Failing to do so, the Seller shall pay the Purchaser, upon the Purchaser's first request, the penalty for the failure to comply with the Contract obligations in the amount of LVL 100 (hundred lats) for each business day of the above delayed reaction.</p> <p>If it is not possible to perform the repair work in 3 (three) months time, the Seller shall deliver a new equivalent equipment. If the replacement equipment has not been delivered in 3 (three) months time, the Seller shall return the Purchaser the sum equal to the equipment purchase amount in 1 (one) month time.</p>
<p>3.7. Garantijas apkalpošanas perioda laikā notikuša bojājuma gadījumā Pārdevējs uz sava rēķina, nepazeminot Preces kvalitāti, veic bojātās daļas nomaiņu vai remontu. Garantijas saistības ir spēkā pie nosacījuma, ka nav iestājušies garantijas sertifikātā norādītie apstākļi, kas pārtrauc garantijas saistības.</p>	<p>3.7. In the event of a damage occurring during the warranty maintenance period, the Seller shall replace the faulty part or make the repair at his/her expense, without diminishing the quality of the Goods. The warranty commitments are valid on the condition that the circumstances stated in the warranty certificate and terminating the warranty commitments, have not set in.</p>
<p>3.8. Precei tiek noteikts garantijas laiks: 2 (divi) gadi no Preces piegādes brīža.</p>	<p>3.8. The following warranty period shall be stipulated for the Goods: 2 (two) years from the performance of the delivery.</p>

<p>3.9. Visos dokumentos, kas saistīti ar šo Līgumu Pārdevējs norāda visus nepieciešamos rekvizītus un datus, tajā skaitā ERAF projekta nosaukumu un numuru (Projekts Nr.: 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004 „Nanostrukturēto un daudzfunkcionālo materiālu, konstrukciju un tehnoloģiju Valsts nozīmes pētniecības centra zinātniskās infrastruktūras attīstīšana”) un iepirkuma identifikācijas numuru (LU CFI 2012/15/ERAF).</p>	<p>3.9. The Contractor shall indicate all the necessary banking data and information including the name and the number of ERDF project (Project No.: 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004 “Development of Scientific Infrastructure for the National Research Centre of Nanostructured and Multifunctional Materials, Constructions and Technologies”) and the procurement identification number (LUCFI 2012/15/ERDF) in all the documents regarding the present Contract.</p>
<p>3.10. Līguma 3.9.p. prasību neievērošanas gadījumā, Pircējs patur tiesības neapmaksāt rēķinus līdz minēto prasību izpildei.</p>	<p>3.10. In the event of non-compliance with the requirements of Item 3.9 of the Contract, the Purchaser shall reserve the rights to make no payment of the invoices until the compliance with the stated requirements.</p>
<p>4. NEPĀRVARAMA VARA</p>	<p>4. FORCE MAJEURE</p>
<p>4.1. Gadījumā, kad rodas nepārvaramas varas apstākļi, tādi kā, dabas katastrofas, karš, jebkuras militāras akcijas, valsts pārvaldes institūciju rīkojumi, lēmumi vai aizliegumi un citi ārkārtēji apstākļi, kurus Puses nevarēja paredzēt un novērst ar saviem līdzekļiem, līgumsaistību izpildes laiks pagarinās par periodu, kurā pastāv nepārvaramas varas radītie apstākļi. Ja nepārvaramas varas apstākļi pastāv ilgāk kā 3 (trīs) mēnešus, Līguma darbība tiek izbeigta un Puses veic savstarpējo norēķinu atbilstoši faktiski piegādātajai Precei.</p>	<p>4.1. In the cases of the force majeure circumstances, such as the natural hazards, war, any military actions, orders by the state administration institutions, decisions or prohibitions and other extraordinary circumstances, which the Parties could not envisage and prevent with their own resources, the time period of compliance with the Contract obligations shall be extended by the period of the existence of the circumstances caused by the force majeure. If the force majeure circumstances exist for more than 3 (three) months, the Contract shall be terminated and the Parties shall make mutual settlement subject to the actually delivered Goods.</p>
<p>5. CITI NOTEIKUMI</p>	<p>5. OTHER CONDITIONS</p>
<p>5.1. Līgums stājas spēkā ar tā parakstīšanas brīdi un darbojas līdz pilnīgai abpusējai Līguma saistību izpildei. Līgums atspoguļo Pušu vienošanos attiecībā uz Līguma priekšmetu, apmaksas, piegādes u.c. nosacījumiem un atceļ visas iepriekšējās sarakstes un mutiskas vienošanās, kas pastāvējušas starp Pusēm līdz Līguma parakstīšanai.</p>	<p>5.1. The Contract shall take effect from the moment of signing and shall be valid until full mutual compliance with the Contract obligations. The Contract shall reveal the agreement of the Parties with respect to the subject of the Contract, conditions of the payment, delivery and other provisions, and shall revoke all the preceding written communication and oral arrangements existing among the Parties until the signing of the Contract.</p>

<p>5.2. Pārdevējs, slēdzot Līgumu, iesniedz Pircējam bankas izsniegtu avansa maksājuma garantiju 50% apmērā no Līgumcenas (ietverot PVN, ja piemērojams) ar derīguma termiņu līdz laikam, kad tiek parakstīts pieņemšanas – nodošanas akts.</p> <p>Pircējs atgriež avansa maksājuma garantiju Pārdevējam vienlaicīgi ar Līguma pieņemšanas – nodošanas akta parakstīšanu.</p>	<p>5.2 The Seller, entering into the Contract, shall submit to the Purchaser the Advance Payment Guarantee issued by the bank in the amount of 50% of the Contract value (including VAT, if applicable) valid until mutual signing of the Deed of Transfer.</p> <p>The Purchaser shall return the Advance Payment Guarantee to the Seller simultaneously with the mutual signing of the Deed of Transfer.</p>
<p>5.3. Pasūtītājs vienpusēji ir tiesīgs lauzt Līgumu, ja Preču piegāde kavējas vairāk par 2 (diviem) nedēļām pēc šī Līguma 2.2.punktā norādītā termiņa beigām.</p>	<p>5.3. The Purchaser shall be entitled to terminate the Contract unilaterally, if the delivery of the Goods has been delayed by more than two (2) weeks following the expiry of the deadline stated in Paragraph 2.2 of the present Contract.</p>
<p>5.4. Ja Prece netiek piegādāta un līgums tiek lauzts, bet Pārdevējs neatmaksā avansu 2 (divu) nedēļu laikā pēc Līguma laušanas, Pircējs pieprasa garantijas izdevējam atmaksāt samaksāto avansu.</p>	<p>5.4. If the Goods are not delivered and the Contract is terminated, but the Seller has failed to repay the advance payment in 2 (two) weeks time after the Contract has been terminated, the Purchaser shall request that the issuer of the above Guarantee repay the advance payment.</p>
<p>5.5. Visi būtiskie paziņojumi, kas attiecas uz šā Līguma noteikumu izpildi, sūtāmi ierakstītā vēstulē uz šā Līguma 6.punktā norādītām adresēm, vai nododami Pusēm personīgi. Ja paziņojumi tiek sūtīti ierakstītā vēstulē, tie uzskatāmi par saņemtiem trešajā dienā pēc to nosūtīšanas. Adreses maiņa kļūst saistoša otrai Pusei, tad, kad Puse, kuras adrese tiek mainīta nosūta tai paziņojumu vai dokumentu, kas apstiprina šādas izmaiņas.</p>	<p>5.5. All notifications related to the compliance with the conditions of the present Contract shall be sent in a registered letter to the addresses stated in Item 6 herein or delivered to the Parties in person. If the notifications are sent in a registered letter, they shall be deemed to be received on the third day after mailing. The change of address shall be binding on the other Party, when the Party whose address is changed sends the other Party a notification or a document certifying such changes.</p>
<p>5.6. Visi strīdi un domstarpības, kādas Pusēm radušās šā Līguma izpildes gaitā, un nav atrisināmas pārrunu ceļā 30 dienu laikā, tiek izskatītas Latvijas Republikas tiesu iestādēs, Latvijas Republikas normatīvajos aktos paredzētajā kārtībā.</p>	<p>5.6. All disputes and disagreements arising between the Parties in the course of compliance with the present Contract and cannot be resolved by way of negotiations in 30 days, shall be settled in the court institutions of the Republic of Latvia in the procedure stipulated by the regulatory enactments of the Republic of Latvia.</p>
<p>5.7. Līguma teksts var tikt grozīts vai papildināts Pusēm savstarpēji vienojoties, noformējot to rakstveidā. Jebkurš šāds rakstisks akts kļūst par šī Līguma neatņemamu sastāvdaļu.</p>	<p>5.7. The text of the Contract may be amended or supplemented upon the mutual agreement of the Parties thereon, executing it in writing. Any such written document shall become an integral part of the present Contract.</p>

<p>5.8. Puses ar savu parakstu apliecina, ka tām ir visas tiesības (pilnvaras) slēgt Līgumu un ar to iegūstot savu pārstāvam vārdā Līgumā minētās tiesības un pienākumus. Ja Pārdevēja pārstāvis līguma noslēgšanas brīdī nav bijis pilnvarots pārstāvēt Pārdevēju, tad viņš/ viņa pats/pati, kā fiziska persona atbild par līgumsaistību izpildi ar visu savu mantu.</p>	<p>5.8. The Parties shall certify with their signatures that they have all the rights (authorisations) to enter into the Contract, thereby acquiring, in the name of the persons represented by them, the rights and obligations stated in the Contract. If the Seller’s representative has not been authorised to represent the Seller at the moment of entering into the Contract, then he/she as a natural person shall be held liable for the compliance with the Contract obligations with all his/her property.</p>
<p>5.9. Puses pilnvaro veikt ar šā Līguma izpildi saistītās darbības (kontaktēties ar otru Pusi, parakstīt Preces pavadzīmes-rēķinus, nodot/saņemt Preci) šādas personas:</p>	<p>5.9. The Parties shall hereby authorise the following persons to perform the activities related to the compliance with the present Contract (to contact with the other Party, to sign the invoices of the Goods, to transfer, to accept the Goods):</p>
<p>5.9.1. no Pircēja puses: _____ _____;</p>	<p>5.9.1. on the Purchaser’s side _____ _____;</p>
<p>5.9.2. no Pārdevēja puses _____ _____.</p>	<p>5.9.2. on the Seller’s side _____ _____.</p>
<p>5.10. Šis Līgums ir uzrakstīts divos autentiskos eksemplāros latviešu un angļu valodā uz 18 (astoņpadsmit) lapām, t.sk. Līguma 1. pielikums uz 10 (desmit) lapām. Pēc Līguma parakstīšanas viens eksemplārs tiek nodots Pircējam, bet otrs – Pārdevējam.</p>	<p>5.10. The present Contract shall be drawn up on 18 (eighteen) pages in Latvian and English in two authentic copies, including Appendix 1 on 10 (ten) pages. After signing of the Contract, one copy shall be delivered to the Purchaser, but the other – to the Seller.</p>

Tender Regulation for the Procurement No.LU CFI 2012/15/ERDF
 “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”

6. LĪGUMSLĒDZĒJU PUŠU JURIDISKĀS ADRESES UN CITI REKVIZĪTI	6. THE LEGAL ADDRESSES AND OTHER DATA OF THE CONTRACTING PARTIES
Pircējs:	Purchaser:
Latvijas Universitātes aģentūra – Latvijas Universitātes Cietvielu fizikas institūts Juridiskā adrese: Ķengaraga iela 8, Rīga, LV-1063, Latvija PVN reģ.Nr. LV90002124925 Norēķinu konts: LV45TREL9154361000000, Banka: Valsts Kase, Bankas kods: TREL LV22	Institute of Solid State Physics University of Latvia Legal address: Kengaraga street 8, Riga, LV-1063, Latvia VAT reg. No. LV90002124925 Account number: LV45TREL9154361000000 Bank: Riga Treasury Unit Code: TREL LV22
Pārdevējs:	Seller:
Nosaukums: _____ Juridiskā adrese: _____ Biroja adrese: _____ PVN reģ.Nr. _____ Norēķinu konts: _____ Banka: _____ Bankas kods: _____	Name: _____ Legal address: _____ Address of the office: _____ VAT reg. No. _____ Account number: _____ Bank: _____ Code: _____
Pircējs / Purchaser:	Pārdevējs / Seller:
_____ Paraksts / Signature Z.v./ Seal	_____ Paraksts / Signature Z.v./ Seal

Līguma pielikums Nr.1

līgumam par iepirkumu Nr. LU CFI 2012/15/ERAF „Furjē transformācijas infrasarkanās spektrometrijas (FT-IR) sistēmas ar mikroskopu un hēlija kriostatu piegāde”, noslēgtam starp LU aģentūru – LU Cietvielu fizikas institūtu

un _____

Annex 1. to the Contract

on the Procurement No. LU CFI 2012/15/ERDF “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat” concluded between the Institute of Solid State Physics University of Latvia

and _____

Rīgā, 2012. gada ____.	Rīga, _____ 2012.
LU Cietvielu fizikas institūta līgumu uzskaites Nr. 2012/15/ERAF	Institute of Solid State Physics University of Latvia Contract registration No. 2012/15/ERDF
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Piegādājamā Prece (iekārtas nosaukums, ražotājs, modelis) / Goods to be supplied (equipment name, manufacturer, model)	Cena piegādes vietā / Price at the place of delivery	Garantijas laiks / Warranty period	Piegādes vieta / Place of delivery
		1 (viens) gads 1 (one) year	LU Cietvielu fizikas institūts, Ķengaraga iela 8, Rīga, Latvija / Institute of Solid State Physics University of Latvia, Kengaraga street 8, Riga, Latvia

TEHNISKĀS SPECIFIKĀCIJAS / TECHNICAL SPECIFICATIONS

**Furjē transformācijas infrasarkanās spektrometrijas (FT-IR) sistēmas ar mikroskopu un hēlija kriostatu piegāde – 1 komplekts
 Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat, 1 set**

No.	Pasūtītāja prasības		Contracting Authority's requirements	
1.	Vispārīgās prasības		General requirements	
1.1	Nenodefinētās prasības	Ja tehniskajās specifikācijās kāda uz šo līgumu attiecošās tehniskā prasība nav definēta, tai ir jāatbilst minimālajām vispārpieņemtajām prasībām vai standartiem.	Undefined requirements	Where any technical requirement referring to the present Contract is not defined in the Technical Specifications, it shall comply with the minimum generally accepted requirements or standards.
1.2	Piegādājama iekārtas stāvoklis	Līguma ietvaros piegādājamā iekārta nedrīkst būt lietota, tajā nedrīkst būt iebūvētas lietotas vai renovētas daļas.	Technical condition of equipment to be delivered	The equipment to be delivered shall not be previously used, the used or the renovated parts shall not be built therein
2.	FT-IR spektrometra specifikācija		FT-IR Spectrometer	
2.1	Sistēmas apraksts	Furjē transformācijas infrasarkanās spektrometrijas (FT-IR) sistēma ar mikroskopu, kas spēj sniegt augstas kvalitātes datus vidējā un tālajā infrasarkanā starojuma diapazonā.	System description	FTIR spectrometry system with microscope capable to deliver high quality data in MIR and FIR ranges.
2.2	Spektrālais diapazons	Vidējais infrasarkanā starojuma diapazons ne mazāk kā 10,000 līdz 380 cm ⁻¹ .	Spectral range	MIR range not less than 10,000 to 380cm ⁻¹
2.3		Tālais infrasarkanais diapazons ne mazāk kā 680 līdz 10 cm ⁻¹		FIR Range not less than 680 to 10cm ⁻¹
2.4		Jānodrošina ar staru dalītājiem, kas ir piemēroti norādītajiem diapazoniem. Jāparedz vismaz divas uzglabāšanas vietas spektrometra korpusa iekšienē.		Beamsplitters needed for described spectral ranges should be provided. At least two internal storage positions should be available in the housing of the spectrometer.

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2.5	Atsūkņēšana	Jāparedz iespēja atsevišķi atsūknēt interferometru un paraugu kameru tādā secībā, lai paraugu nodalījumu varētu pakļaut atmosfēras spiedienam, nezaudējot vakuumu interferometrā un detektoru kamerās.	Evacuation	The interferometer and sample chambers must be separately evacuable in order that the sample compartment may be brought up to atmospheric pressure without losing vacuum in the interferometer and detector chambers.
2.6	Jutīgums	Minimālajai signāla/trokšņa attiecībai 5 sekunžu (5 sekundes paraugam un 5 sekundes etalonam) 100% līnijas mērījumā jāpārsniedz 9500:1 virsotne pret virsotni (vai $< 4,7 \cdot 10^{-5}$ AU troksnis) šādos apstākļos: - 4 cm^{-1} spektrālā izšķirtspēja; - Blekmena-Harisa 3 locekļu apodizācija; - Deiterija triglicīna sulfāta (DTGS) detektors, KBr staru dalītājs un ar gaisu dzesēts avots. Troksnis aprēķināts kā virsotne pret virsotni starp 2200 un 2100 cm^{-1} . Vidējā vērtība aprēķināta no 10 secīgu mērījumu vērtībām.	Sensitivity	The minimum signal to noise for a 5 second (5 sec sample and 5 sec reference) 100% line measurement should exceed 9500:1 peak-to-peak (or $< 4,7 \cdot 10^{-5}$ AU noise) using the following conditions. - 4 cm^{-1} spectral resolution - Blackman Harris 3-Term apodization - DTGS detector, KBr beam-splitter and air cooled source Noise calculated as peak-to-peak between 2200 to 2100 cm^{-1} Average value calculated from values for 10 consecutive measurements.
2.7	Izšķirtspēja	Iekārtas spektrālajai izšķirtspējai jābūt nepārtraukti maināmai līdz maksimumam ne mazākam par vismaz $0,2 \text{ cm}^{-1}$ (ar apodizāciju) un tam jābūt uzlabojamam līdz izšķirtspējai, kas ir labāka par $0,06 \text{ cm}^{-1}$ (ar apodizāciju).	Resolution	The instrument spectral resolution should be continuously variable to a maximum of at least 0.2 cm^{-1} (apodized) and should be upgradeable to better than 0.06 cm^{-1} resolution (apodized).
2.8	Analog-ciparu pārveidotājs	Spektrometram jābūt PILNĪBĀ digitālam ar analogciparu pārveidotāju, kas ir integrēts ar detektora priekšpastiprinātāju. Daļēji analogie spektrometri nav pieņemami iespējamās trokšņu uztveršanas dēļ un analogā signāla pasliktināšanās dēļ signāla ceļā no detektora līdz analogciparu pārveidotājam.	ADC	The spectrometer must be FULLY digital, with the ADC converter integrated with the detector preamplifier. Partly analog spectrometers are not acceptable due to possible noise pickup and degradation of the analog signal along the signal path from the detector to the ADC.

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2.9		Sistēmas analogciparu pārveidotājam jābūt ar 24- bitu dinamisko diapazonu precīzai spektra atveidei un vislabākajai signāla attiecībai pret troksni. Pastiprinājuma pārslēgšanas ķēdes nav pieņema-mas augstāka dinamiskā diapazona sasniegšanai, tāpēc ka tās var kļūt par kļūdu avotu datos.		The systems A/D converter must have a 24 bit dynamic range for accurate representation of spectra and best signal to noise. Gain switching schemes to achieve higher dynamic range are not acceptable, due to generation of artifacts in the data.
2.10	Apertūra	Caurlaides spējas optimizācijai iekārtā jāiekļauj ar programmatūru vadāmu apertūras ripu ar 12 pozīcijām diapazonā no 0,25 līdz 8 mm. Īrisa apertūra nav pieņemama, jo nenodrošina atkārtotamību.	Aperture	The instrument should include a software controlled aperture wheel with 12 positions ranging from 0.25 up to 8mm for optimization of throughput. An iris-aperture is not acceptable, due to lack of reproducibility.
2.11	Veiktspējas vadība	Spektrometra komponentes, tādas kā avots, lāzers, detektors, interferometrs un automatizācijas bloki, nepārtraukti jāvēro, lai tie darbotos saskaņā ar ražotāja specifikācijām. Sistēmas programmatūrai nekavējoši jāziņo operatoram, ja kāda no ražotāja specifikācijām netiek ievērota. Programmatūrai jāsniedz detalizēta informācija par kļūmes raksturu un jāiesaka iespējamie risinājumi.	Performance control	Spectrometer components such as source, laser, detector, interferometer and automation units must be continuously monitored for operation within factory specifications. The operator must be immediately notified by system software if any of the factory specifications are not met. The software must offer detailed information about the nature of the failure and suggest possible remedies.
2.12	Piederumu atpazīšana	Optiskiem komponentiem, tādiem kā detektors, avots un staru dalītājs jābūt elektroniski kodētiem, lai šie komponenti tiktu automātiski atpazīti, ja tos ievietotu vai izņemtu no spektrometra. Programmatūrā automātiski jāievada piemēroti lietotāja iestatāmie parametri.	Accessory recognition	Optical components such as detector, source and beamsplitter must be electronically coded, so that these components are automatically recognized when placed in the spectrometer or removed. Appropriate acquisition parameters must be automatically set in the software.

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2.13	Paraugu nodalījums	Galvenajam paraugu nodalījumam jābūt centrētam fokusam, lai tajā būtu iespējams izvietot komerciāli pieejamu piederumu, kā arī lielu individualizētu piederumu pilnu klāstu. Paraugu nodalījuma izmēriem jābūt ne mazākiem par 24 cm (platums), 25 cm (dziļums), un 15 cm (augstums). Paraugu nodalījuma vākam jābūt viegli noņemamam bez instrumentu palīdzības. Jāparedz automātiski paraugu nodalījuma aizvari.	Sample compartment	The main sample compartment should have a center focus to accommodate the complete range of commercially available accessories and large customized accessories. The sample compartment should measure not less than 24 cm (wide) by 25 cm (deep) by 15 cm (high). The sample compartment cover should be easily removable without the use of tools. Automatic sample compartment shutters must be provided.
2.14	Piederumu uzstādīšana	Paraugu nodalījumam jābūt aprīkotam ar mehānisku slēdzējmehānismu ātrai, drošai un atkārtojamai paraugu veidošanas piederumu izvietojumam. Jāparedz iespēja mainīt piederumus bez instrumentu izmantošanas.	Accessory mount	The sample compartment must be equipped with mechanical lock mechanism for quick, secure and reproducible positioning of sampling accessories. The change of accessories must be possible without using any tools.
2.15	Interferometri	Interferometram jābūt lineāri izlīdzinātam (True-Aligned) ar aktīvu izlīdzināšanu interferometra skenēšanas korpusā. Aktīvai izlīdzināšanai (True-Alignment) jābūt pietiekami ātrai, lai saglabātu interferometra izlīdzinājumu skenēšanas gaitā. Nekustīga spoguļa dinamiskais izlīdzinājums nav pieņemams, jo neraugoties uz to, ka tas der FTIR spektrometra spektrālas izšķirtspējas optimizācijai, dažos gadījumos tas var novirzīt izejas staru attiecībā pret detektoru tiktāl, ka samazinās sistēmas stabilitāte un rodas spektrālās blakusparādības.	Interferometer	The interferometer must be True-Aligned, with active alignment inside the scanning arm of the interferometer. The active True-Alignment must be fast enough to maintain alignment of the interferometer during the scan. Dynamic alignment of the fixed mirror of the interferometer is not acceptable, because while it can serve to optimize the spectral resolution of an FTIR spectrometer, in some cases it may move the output beam relative to the detector enough to reduce system stability and create spectral artifacts
2.16		Interferometram jābūt spējīgam iegūt datus abos skenēšanas virzienos, lai nodrošinātu maksimālu signāla/trokšņa attiecību iespējami īsākajā laika posmā.		The interferometer should be capable of acquiring data in both scanning directions to ensure the maximum signal-to-noise ratio in the shortest possible time.

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2.17		Interferometra gultņu mehānismam jābūt veidotam tā, lai tas nenolietotos (bez berzes), tādā veidā nodrošinot neierobežotu iekārtas darbības ilgumu. Gultņi, kas laika gaitā nolietojas nav pieņemami, jo to izmantošana noved pie iekārtas darbības traucējumiem, biežas apkalpošanas un dārgiem remontiem.		The interferometer bearing mechanism must be wear-free (frictionless) design to ensure unlimited lifetime. Bearings that wear over time are not acceptable because they result in downtime, require frequent maintenance and costly repair.
2.18	Avoti	Avotiem jābūt lietotājam viegli pieejamiem un nomaināmiem.	Sources	The sources must be easily user replaceable and must be easily accessible.
2.19		Jāparedz augstas enerģijas dzīvsudraba loka plazmas avots ļoti tālam infrasarkanajam diapazonam.		High power Hg-arc plasma source for the very far IR spectral range must be provided.
2.20		Jāparedz tuvā infrasarkanā starojuma avots un ar programmatūru vadāms starpavotu pārslēgmehānisms.		NIR source and switching mechanism controlled by means of software between sources must be provided.
2.21	Detektori	Detektoriem jābūt viegli nomaināmiem, to novietojumam jābūt precīzi atkārtojamam un tiem jāparedz drošības fiksators.	Detectors	The detectors must be easily user changeable, with exactly reproducible positioning and a security lock.
2.22	Pārbaude	Sistēmā jāiekļauj automātisku iekšējo iekārtas pārbaudes bloku. Jāparedz iespēja ietvert iekšējās pārbaudes blokā 5 dažādus pārbaudes standartus un tam jābūt pilnībā vadāmam ar programmatūru. Blokā jāiekļauj iekārtas viļņa garuma (x -ass) un fotometriskās (y -ass) precizitātes pārbaudes standarti. Šai iekārtas pārbaudei jānorisinās bez lietotāja dalības, un tai jāveido ziņojums, kas dokumentē pārbaudes testu rezultātus.	Validation	The system must incorporate an automated internal instrument validation unit. The internal validation unit must be able to incorporate 5 different validation standards and be fully software controlled. The unit must have validation standards to test for instrument wavelength (X-axis) and photometric (Y-axis) accuracy and precision. This instrument validation must not require user interaction and must produce a report documenting the results of the validation tests.
2.23	Spektra attēls	Spektrometram jānodrošina reālā laikā infrasarkanā spektra attēlošana.	Spectrum display	The spectrometer must provide real time display of the infrared spectrum.
2.24	Diagnostika	Sistēmai jāsniedz attālinātas diagnostikas iespēja.	Diagnostics	The system must offer remote diagnostics

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2.25	Ieejas stari	Optiskajam solam jāatbalsta līdz diviem ar datoru vadāmiem ieejas stariem, šiem stariem jābūt pieejamiem no spektrometra optiskās sistēmas labās puses un aizmugures. Labās puses ieejas staram jāvirzās caur iekšējo apertūru un pārbaudes ripām.	Input beams	Optical bench must support up to 2 computer controlled input beams accessible from the right and rear side of the spectrometer optics. The right side input beam must pass through both the internal aperture and validation wheels.
2.26	Vakuumsūknis	Spektrometrā jāiekļauj vakuuma sūknis, kurā neizmanto eļļu, ar ražību vismaz 14 m ³ /stundā	Vacuum pump	The spectrometer must include an oil-free vacuum pump with a capacity of 14 m ³ /h
2.27	Tīkla spriegums	Sistēmai jābūt aprīkotai ar plaša diapazona barošanu ar šādām specifikācijām, lai ļautu to izmantot visā pasaulē: 100 - 240 V maiņspriegums, 50 - 60 Hz, parasti 700 W, ieskaitot vakuumsūkni (bez datu sistēmas apstrādei paredzēta datora).	Power	The system must have a broad range power supply with the following specifications for world-wide operation: 100 - 240 VAC, 50 - 60 Hz, typically 700W including vacuum pump (without PC-data system).
2.28	Uzlabošanas iespējas	Jāparedz iespēja pievienot iekārtai ārējo paraugu nodalījumu.	Upgrade-ability	The instrument should have an external sample compartment option available.
3.		FTIR Mikroskops		FTIR Microscope
3.1	Spektrālais diapazons	10000 – 450 cm ⁻¹	Spectral range	10000 – 450cm ⁻¹
3.2	Spektrālā izšķirtspēja	Ne zemāka par FTIR spektrometra izšķirtspēju.	Spectral resolution	Not less than for FTIR spectrometer.
3.3	Tīkla spriegums	230 V ± 10%; 250 VA	Power	230V ± 10%; 250 VA
3.4	Regulēšanas precizitāte	Manuālās un mehānizētās platformas precizitāte ne mazāka par ± 1 μm. Jāparedz manuāla fokusēšana, lai varētu smalki noregulēt fokusu līdz difrakcijas robežai. Autofokusēšanas iespēja tiek piesaistīta no ārpusē fokussēšanas regulatoram, lai būtu iespējama programmatūras vadīta fokusēšana, nezaudējot iespēju veikt smalku fokusēšanas vadību.	Adjustment accuracy	Manual and motorized stage accuracy to better than ± 1μm. The focus should be manual to allow for fine focus to the diffraction limit. The autofocus option attaches externally to the focus knob to allow software control of the focus without sacrificing fine focus control

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3.5	Vizuālais režīms	Mikroskops jāaprīko paraugu vizuālajiem novērojumiem. Jāparedz iespēja izmantot redzamā diapazona polarizatorus, lai pastiprinātu kontrastu paraugos. Turklāt, jāparedz iespēja darboties redzamajā/infrasarkanajā režīmā, lai varētu vienlaikus veikt parauga vizuālo novērošanu un spektrālo analīzi.	Visible mode	Microscope should be equipped for visual observation of the samples. Should be possible to use visible polarizers to enhance the contrast within a sample. In addition should be possible to operate in the VIS/IR mode allowing simultaneous visual observation and spectral analysis of the sample
3.6	Darba attālums	Ne mazāks par 24 mm ar standarta 15x objektīvu	Working distance	Not less than 24 mm with the standard 15x objective
3.7	Detektors	Dzīvsudraba kadmija telurīda (MCT) platjoslas detektors, šķidrā slāpekļa dzesēšana, 0.25 mm x 0.25 mm, spektrālais diapazons: 10000-450 cm ⁻¹ , D* _≥ 5 x 10 ⁹ cm Hz ^{1/2} /W, turēšanas laiks (Hold time) parasti – 8 h.	Detector	MCT broad band, liquid N ₂ cooled, 0.25 mm x 0.25 mm, spectral range: 10000-450 cm ⁻¹ , D* _≥ 5 x 10 ⁹ cm Hz ^{1/2} /W, Hold time typically 8 h.
3.8	Jutīgums	Lai nodrošinātu piedāvātās sistēmas spēju apstrādāt sarežģītus paraugus, sistēmai jāspēj nodrošina šādas signāla/trokšņa specifikācijas: SNR > 6,500:1 pie šādiem nosacījumiem: 100 mikronu apertūra Caurlaides režīms, 15x pastiprinošs objektīvs 4 cm ⁻¹ izšķirtspēja 2 minūšu fona mērījums 2 minūšu parauga mērījums no virsotnes uz virsotni mērīts troksnis no 2200 - 2000 cm ⁻¹ triangulārā apodizācija vidējas joslas dzīvsudraba kadmija telurīda detektors	Sensitivity	Or in order to establish that the proposed system can perform for difficult samples, the system should be able to meet or exceed the following signal-to-noise specification: SNR > 6,500:1 under the following conditions: 100 micron aperture Transmission mode, 15x objective 4 cm ⁻¹ resolution 2 minute background measurement 2 minute sample measurement peak-to-peak noise measured from 2200 - 2000 cm ⁻¹ triangular apodization Mid-band MCT detector
3.9	Objektīvi	Jānodrošina palielinājums ne mazāks kā 15x (labāks par 0,4 N/A) un 36x liels palielinājums (labāks par 0,5 N/A) objektīviem, kas paredzēti caurlaides un atstarošanās mērījumiem.	Objectives	Not less than 15x magnification (better than 0.4 N/A) and 36x magnification (better than 0.5 N/A) objectives for transmission and reflection measurements should be provided.

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3.10	LCD displejs	Mikroskopā jābūt integrētam augstas izšķirtspējas krāsu LCD displejam infrasarkanā paraugu aplūkošanai.	LCD monitor	Microscope should have integrated high resolution colour LCD monitor for IR sample observation.
4.		Slēgta cikla hēlija kriostats FTIR spektrometram		Closed Cycle Helium Cryostat for FTIR Spectrometer
4.1	Tehniskais apraksts	Slēgta cikla hēlija kriostats komplektā ar hēlija kompresoru. Parauga temperatūra: 10 K līdz istabas temperatūrai Ultrazemo svārstību kriostats, kas speciāli izgatavots FTIR spektrometram. Paraugu pārvietošanas sistēma z-ass virzienā, kura pieļauj 3 neatkarīgu paraugu mērīšanu vienā ciklā. Hēlija kriostata temperatūras kontrolieris.	Technical description	Closed Cycle Helium Cryostat complete with helium compressor. Sample temperature: 10 K to room temperature Ultra Low Vibrations Cryostat specially manufactured for FTIR Spectrometer 3-samples system with Z-translator He cryostat temperature controller
5.		Programmatūra un darba stacija		Software and PC workstation
5.1	Programmatūra	FTIR un mikroskopa vadības, kā arī datu vākšanas un analizēšanas programmatūrai jābūt pievienotai komplektā ar iekārtām. Programmatūrai jābūt pārbaudītai.	Software	Software for FTIR and microscope control as well as data collection and analysis should be provided together with the instruments. The operating software must be validated.
5.2		Tai jāatbilst vispārējās publiskās licences prasībām. Tai pilnībā jāatbilst ASV Federālo noteikumu kodeksa 21. sadaļas 11. nodaļas noteikumiem. Programmatūrai jānodrošina datu mērījumu, apstrādes un novērtēšanas funkcijas. Jābūt iekļautai optiskā stara ceļa saskarnei, lai ar datorpeles taustiņa palīdzību automātiski izvēlētos pieejamos optiskos komponentus un ieejas/izejas staru parametrus.		Must be GLP compliant. Must be fully compliant with 21 CFR part 11 regulations of United States FDA. Must be "all-in-one" software for data measurement, manipulation and evaluation. Must include an optical beam path interface to select the available optical components and input/output beam options automatically by a mouse click.

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5.3	Darba stacijas dators	Jāiekļauj dators abu iekārtu darbībai un vadībai. Datoram jāatbilst ražotāja ieteiktajām minimālajām veiktspējas prasībām. Darba stacijā jāiekļauj vismaz 1 (viens) TFT monitors un lāzerprinteris.	PC workstation	Computer for work and control of both instruments should be provided. It should comply with minimal needed requirements of the manufacturer’s suggestions. Should as well include at least 1 (one) TFT monitor and laser printer.
6.		Garantija un pēc garantijas remontdarbi		Warranty and post warranty works
6.1	Garantija	Jāsniedz vismaz 1 (viena) gada garantija detaļām un iekārtas remontdarbiem.	Warranty	Manufacturer’s warranty for parts and works not less than 1 (one) year should be provided.
6.2	Pēc garantijas remontdarbi	Iekārtas piegādātājam par atsevišķu samaksu (kas netiek iekļauta finanšu piedāvājumā) jāspēj sniegt pēc garantijas remontdarbu pakalpojumi vismaz 5 (piecus) gadus.	Post warranty works	The supplier of the instrument shall to be capable to provide post warranty works for additional charge (which shall not be included in the financial bid) for at least 5 (five) years.
7.		Piegāde un uzstādīšana		Delivery and installation
7.1	Piegādes un uzstādīšanas izmaksas	Piegādes un uzstādīšanas un izmaksām jābūt iekļautām spektrometra cenā.	Delivery and installation costs	Delivery and installation costs should be included in the offer of the spectrometer.
7.2	Piegādes un uzstādīšanas laiks	Spektrometra un mikroskopa piegādei un uzstādīšanai jānotiek ne vēlāk kā 5 (piecu) mēnešu laikā pēc līguma noslēgšanas.	Delivery time	Delivery and installation of the spectrometer and microscope should be done in 5 (five) months by latest.

Pircējs / Purchaser:	Pārdevējs / Seller:
_____	_____
Paraksts / Signature Z.v./ Seal	Paraksts / Signature Z.v./ Seal

SHALL BE FILLED IN BY THE TENDERER

ANNEX 3.1

to the Regulation of the Open Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat” (LU CFI 2012/15/ERDF)

APPLICATION FOR PARTICIPATION IN OPEN TENDER

Contracting Authority: Institute of Solid State Physics University of Latvia

Procurement ID No: LUCFI/2012/15/ERDF

/Date/

**Subject of the procurement: Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat
(ERDF Project ID No: 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004)**

Having acquainted ourselves with the Tender Regulation, we, the undersigned, offer to provide the Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat pursuant to the requirements stipulated by the Tender Regulation and agreeing with all provisions of the Tender, in the amount as stated below:

(total Offer price in letters and figures)

Should our Offer be accepted, we undertake to provide the delivery according to the requirements stipulated by the Technical Specifications within 5 (five) months from entering into the Contract in line with the Technical Bid which is an integral part of our Offer.

We hereby acknowledge that the Offer validity term shall be 3 (three) months.

We hereby submit our Offer incorporating the Tenderer selection documents, Technical Bid and Financial Bid.

Name of the Tenderer:	
Registered address	
Actual address	
Registration number	
VAT payer's number	
Telephone	
Fax	
e-mail address	
Internet address	
Contact person	
Telephone and e-mail address of the Contact person	
Name, surname and position of the authorised representative	
Signature of the authorised representative	

SHALL BE FILLED IN BY THE TENDERER

ANNEX 3.2

to the Regulation of the Open Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat” (LU CFI 2012/15/ERDF)

A list of the performed relevant contracts on the delivery of research equipment during the last three years

(Give reference to no more than 3 main Contracts)

Nr.	Brief description of the Contracts	Amount of the executed Contract	Name and address of the Client	Commencement and completion of the Contract (Year/month)

The signature of the Tenderer’s authorised person:

/Name, surname/ /Position/ /Signature/

_____, _____ 2012
(place) (date)

SHALL BE FILLED IN BY THE TENDERER

ANNEX 3.2

to the Regulation of the Open Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat” (LU CFI 2012/15/ERDF)

A list of the Tenderer’s personnel to be employed in the installation of the FTIR Spectrometry System and warranty and post-warranty repair work in accordance with the terms and conditions of the Contract

Name, Surname	Position	Speciality, qualification, experience

The signature of the Tenderer’s authorised person:

/Name, surname/ /Position/ /Signature/

_____, _____ 2012
(place) (date)

to the Regulation of the Open Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat” (LU CFI 2012/15/ERDF)

SHALL BE FILLED IN BY THE TENDERER

THE TECHNICAL SPECIFICATION AND THE SUBMISSION FORM OF THE TECHNICAL BID

For the Procurement “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat, 1 set”

(Procurement will be performed within the ERDF Project
 No.: 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004 “Development of Scientific Infrastructure for the National Research Centre of Nanostructured and Multifunctional Materials, Constructions and Technologies”)

No.		Contracting Authority’s requirements	Tenderer’s Technical Bid (shall be filled in by the Tenderer indicating whether the Bid is compliant with the requirements)
1.		General requirements	
1.1	Undefined requirements	Where any technical requirement referring to the present Contract is not defined in the Technical Specifications, it shall comply with the minimum generally accepted requirements or standards.	
1.2	Technical condition of equipment to be delivered	The equipment to be delivered shall not be previously used, the used or the renovated parts shall not be built therein	
2.		FT-IR Spectrometer	Manufacturer: Model:
2.1	System description	FTIR spectrometry system with microscope capable to deliver high quality data in MIR and FIR ranges.	
2.2	Spectral range	MIR range not less than 10,000 to 380cm ⁻¹	
2.3		FIR Range not less than 680 to 10cm ⁻¹	
2.4		Beamsplitters needed for described spectral ranges should be provided. At least two internal storage positions should be available in the housing of the spectrometer.	
2.5	Evacuation	The interferometer and sample chambers must be separately evacuable in order that the sample compartment may be brought up to atmospheric pressure without losing vacuum in the interferometer and detector chambers.	

Tender Regulation for the Procurement No.LU CFI 2012/15/ERDF
 “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”

2.6	Sensitivity	<p>The minimum signal to noise for a 5 second (5 sec sample and 5 sec reference) 100% line measurement should exceed 9500:1 peak-to-peak (or $< 4,7 \cdot 10^{-5}$ AU noise) using the following conditions:</p> <ul style="list-style-type: none"> - 4 cm^{-1} spectral resolution; - Blackman Harris 3-Term apodization; - DTGS detector, KBr beam-splitter and air cooled source. <p>Noise calculated as peak-to-peak between 2200 to 2100 cm^{-1} Average value calculated from values for 10 consecutive measurements.</p>	
2.7	Resolution	<p>The instrument spectral resolution should be continuously variable to a maximum of at least 0.2 cm^{-1} (apodized) and should be upgradeable to better than 0.06 cm^{-1} resolution (apodized).</p>	
2.8	ADC	<p>The spectrometer must be FULLY digital, with the ADC converter integrated with the detector preamplifier. Partly analog spectrometers are not acceptable due to possible noise pickup and degradation of the analog signal along the signal path from the detector to the ADC.</p>	
2.9		<p>The systems A/D converter must have a 24 bit dynamic range for accurate representation of spectra and best signal to noise. Gain switching schemes to achieve higher dynamic range are not acceptable, due to generation of artifacts in the data.</p>	
2.10	Aperture	<p>The instrument should include a software controlled aperture wheel with 12 positions ranging from 0.25 up to 8 mm for optimization of throughput. An iris-aperture is not acceptable, due to lack of reproducibility.</p>	
2.11	Performance control	<p>Spectrometer components such as source, laser, detector, interferometer and automation units must be continuously monitored for operation within factory specifications. The operator must be immediately notified by system software if any of the factory specifications are not met. The software must offer detailed information about the nature of the failure and suggest possible remedies.</p>	
2.12	Accessory recognition	<p>Optical components such as detector, source and beam splitter must be electronically coded, so that these components are automatically recognized when placed in the spectrometer or removed. Appropriate acquisition parameters must be automatically set in the software.</p>	

Tender Regulation for the Procurement No.LU CFI 2012/15/ERDF
 “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”

2.13	Sample compartment	The main sample compartment should have a center focus to accommodate the complete range of commercially available accessories and large customized accessories. The sample compartment should measure not less than 24 cm (wide) by 25 cm (deep) by 15 cm (high). The sample compartment cover should be easily removable without the use of tools. Automatic sample compartment shutters must be provided.	
2.14	Accessory mount	The sample compartment must be equipped with mechanical lock mechanism for quick, secure and reproducible positioning of sampling accessories. The change of accessories must be possible without using any tools.	
2.15	Interferometer	The interferometer must be True-Aligned, with active alignment inside the scanning arm of the interferometer. The active True-Alignment must be fast enough to maintain alignment of the interferometer during the scan. Dynamic alignment of the fixed mirror of the interferometer is not acceptable, because while it can serve to optimize the spectral resolution of an FTIR spectrometer, in some cases it may move the output beam relative to the detector enough to reduce system stability and create spectral artifacts	
2.16		The interferometer should be capable of acquiring data in both scanning directions to ensure the maximum signal-to-noise ratio in the shortest possible time.	
2.17		The interferometer bearing mechanism must be wear-free (frictionless) design to ensure unlimited lifetime. Bearings that wear over time are not acceptable because they result in downtime, require frequent maintenance and costly repair.	
2.18	Sources	The sources must be easily user replaceable and must be easily accessible.	
2.19		High power Hg-arc plasma source for the very far IR spectral range must be provided.	
2.20		NIR source and switching mechanism controlled by means of software between sources must be provided.	
2.21	Detectors	The detectors must be easily user changeable, with exactly reproducible positioning and a security lock.	

Tender Regulation for the Procurement No.LU CFI 2012/15/ERDF
 “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”

2.22	Validation	The system must incorporate an automated internal instrument validation unit. The internal validation unit must be able to incorporate 5 different validation standards and be fully software controlled. The unit must have validation standards to test for instrument wavelength (X-axis) and photometric (Y-axis) accuracy and precision. This instrument validation must not require user interaction and must produce a report documenting the results of the validation tests.	
2.23	Spectrum display	The spectrometer must provide real time display of the infrared spectrum.	
2.24	Diagnostics	The system must offer remote diagnostics	
2.25	Input beams	Optical bench must support up to 2 computer controlled input beams accessible from the right and rear side of the spectrometer optics. The right side input beam must pass through both the internal aperture and validation wheels.	
2.26	Vacuum pump	The spectrometer must include an oil-free vacuum pump with a capacity of 14 m ³ /h	
2.27	Power	The system must have a broad range power supply with the following specifications for world-wide operation: 100 - 240 VAC, 50 - 60 Hz, typically 700 W including vacuum pump (without PC-data system).	
2.28	Upgradeability	The instrument should have an external sample compartment option available.	
3.		FTIR Microscope	Manufacturer: Model:
3.1	Spectral range	10000 – 450cm ⁻¹	
3.2	Spectral resolution	Not less than for FTIR spectrometer.	
3.3	Power	230 V ± 10%; 250 VA	
3.4	Adjustment accuracy	Manual and motorized stage accuracy to better than ± 1µm. The focus should be manual to allow for fine focus to the diffraction limit. The autofocus option attaches externally to the focus knob to allow software control of the focus without sacrificing fine focus control	
3.5	Visible mode	Microscope should be equipped for visual observation of the samples. Should be possible to use visible polarizers to enhance the contrast within a sample. In addition should be possible to operate in the VIS/IR mode allowing simultaneous visual observation and spectral analysis of the sample	

Tender Regulation for the Procurement No.LU CFI 2012/15/ERDF
 “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”

3.6	Working distance	not less than 24 mm with the standard 15x objective	
3.7	Detector	MCT broad band, liquid N ₂ cooled, 0.25 mm x 0.25 mm, spectral range: 10000-450 cm ⁻¹ , D* ₀ ≥ 5 x 10 ⁹ cm Hz ^{1/2} /W, Hold time typically 8 h.	
3.8	Sensitivity	In order to establish that the proposed system can perform for difficult samples, the system should be able to meet or exceed the following signal-to-noise specification: SNR > 6,500:1 under the following conditions: - 100 micron aperture - Transmission mode, 15x objective - 4 cm ⁻¹ resolution - 2 minute background measurement - 2 minute sample measurement - peak-to-peak noise measured from 2200 - 2000 cm ⁻¹ - triangular apodization - Mid-band MCT detector	
3.9	Objectives	Not less than 15x magnification (better than 0.4 N/A) and 36x magnification (better than 0.5 N/A) objectives for transmission and reflection measurements should be provided.	
3.10	LCD monitor	Microscope should have integrated high resolution colour LCD monitor for IR sample observation.	
4.		Closed Cycle Helium Cryostat for FTIR Spectrometer	Manufacturer: Model:
4.1	Technical description	Closed Cycle Helium Cryostat complete with helium compressor. Sample temperature: 10 K to room temperature. Ultra Low Vibrations Cryostat specially manufactured for FTIR Spectrometer. He cryostat temperature controller.	
5.		Software and PC workstation	Software Version: PC Model:
5.1	Software	Software for FTIR and microscope control as well as data collection and analysis should be provided together with the instruments. The operating software must be validated.	
5.2		Must be GLP compliant. Must be fully compliant with 21 CFR part 11 regulations of United States FDA. Must be "all-in-one" software for data measurement, manipulation and evaluation. Must include an optical beam path interface to select the available optical components and input/output beam options automatically by a mouse click.	

Tender Regulation for the Procurement No.LU CFI 2012/15/ERDF
 “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat”

5.3	PC workstation	Computer for work and control of both instruments should be provided. It should comply with minimal needed requirements of the manufacturer’s suggestions. Should as well include at least TFT monitor and laser printer.	
6.		Warranty and post warranty works	
6.1	Warranty	Manufacturer’s warranty for parts and works not less than 1 (one) year should be provided.	
6.2	Post warranty works	The supplier of the instrument shall to be capable to provide post warranty works for additional charge (which shall not be included in the financial bid) for at least 5 (five) years.	
7.		Delivery and installation	
7.1	Delivery and installation costs	Delivery and installation costs should be included in the offer of the spectrometer.	
7.2	Delivery time	The spectrometer and microscope shall be delivered and installed no later than within 5 (five) months of the day the Contract has been signed.	

Whereby we acknowledge that no circumstances exist preventing us from participation in the present Tender procedure and comply with the requirements stated in the technical specifications.

The signature of the Tenderer’s authorised person:

_____ /Name, surname/ _____ /Position/ _____ /Signature/
 _____ , _____ 2012
 (place) (date)

to the Regulation of the Open Tender “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat” (LU CFI 2012/15/ERDF)

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FINANCIAL BID*

For the Procurement “Delivery of FTIR Spectrometry System with Microscope and Closed Cycle Helium Cryostat, 1 set”

(Procurement will be performed within the ERDF Project
No.: 2011/0041/2DP/2.1.1.3.1/11/IPIA/VIAA/004 “Development of Scientific Infrastructure for the National Research Centre of Nanostructured and Multifunctional Materials, Constructions and Technologies”)

Positions	Total price* in letters and figures
FT-IR Spectrometer Model:	
FTIR Microscope Model:	
Closed Cycle Helium Cryostat for FTIR spectrometer Model:	
PC workstation Model: and Software Versions:	
Delivery and installation	

* The price of the Financial Bid shall be stated with all the discounts and all the taxes imposed on the order, the VAT excluded. If the price is given in currency different from LVL, it will be converted in LVL according to the exchange rate fixed by the Bank of Latvia on the day of opening the bids.

The signature of the Tenderer’s authorised person:

/Name, surname/ /Position/ /Signature/

_____, _____ 2012
(place) (date)