

Date: May 15, 2012

RE: Purchase of a Complete Picosecond Sum Frequency Generation Spectrometer

Dear Potential Respondent:

The University of Oregon (University), is seeking a complete picosecond sum frequency generation spectrometer for use at the Richmond Lab in the University's Chemistry Department. The Richmond Lab currently has two spectrometers and is seeking to purchase the third spectrometer to access a wavelength region unobtainable with existing instrumentation.

This letter does not constitute a solicitation for bids or an offer of a contract. Responses will not bind you to the University (or the University to you) contractually or monetarily, or in any other way. Please do not respond exclusively by telephone or merely by sending marketing brochures. Please feel free to make suggestions, in addition to responding to the questions. Please submit your responses to Lawrence Scatena at scat@uoregon.edu, by no later than May 22, 2012 at 5pm. Responses submitted after this date may be considered if the University, in its sole discretion, deems appropriate or desirable.

Once the University receives all information it wishes to obtain, it will evaluate the information and determine whether to negotiate with you. The University may negotiate with no vendors, one vendor, or more than one vendor. It is the University's intent to purchase the components and services it deems, in its sole discretion, to provide the best value to the University, though the University may choose to purchase no components or services. Price will be one of many factors considered in any purchase. The factors considered are not limited to those addressed in this letter, the responses to this letter, or any other inquiries the University might make and responses it might receive. The University reserves the right to request equipment demonstrations, if in its sole discretion; the University determines that demonstrations are in its best interest. The University is under no obligation to share additional information with you beyond that contained in this letter but may do so if the University, in its sole discretion, deems it advantageous.

It is hoped that the result of this process will be a binding contract between the University and a vendor which will include terms and conditions substantially set forth in the draft contract enclosed with this letter. If you have questions, concerns or proposed revisions to any of the terms and conditions contained in the attached contract, you must address those in your response. If you do not address your questions, concerns or proposed revisions in your response, the following terms and conditions in the attached agreement will be non-negotiable and will not be subject to revision: Sections: 11 through 17.

A. Objective:

The University is seeking information to use in negotiating the acquisition of a complete picosecond vibrational sum frequency generation (VSFG) spectrometer for the Richmond Lab. It is required that the spectrometer be complete and thus contain all of the necessary optics, lasers, optomechanics, and detection electronics to conduct VSFG analysis on liquid/liquid and/or solid/vapor samples.

The University is requesting the purchase of a complete VSFG spectrometer that will also meet the necessary requirements for integration with two existing EKSPLA VSFG spectrometer systems currently employed in the laboratory. Integration requirements include having similar temporal, spectral and spatial pulse characteristics for both mid-infrared and 532 nm beams used at the experiment. Having similar pulse characteristics to the existing EKSPLA VSFG spectrometers will limit spectral artifacts and allow VSFG spectral data from the proposed spectrometer to be directly compared with data from existing EKSPLA spectrometers without further data analysis and manipulation.

The requested VSFG spectrometer is being purchased to access a wavelength region unobtainable with existing instrumentation. The new spectrometer must be capable of producing 10-50 Hz tunable mid-infrared radiation in the region of 9000-16000 nm in order to conduct surface VSFG investigations on samples containing vibrational frequencies coincident with this wavelength region. 532 nm radiation must be used as the visible beam for up-conversion in the traditional two beam (mid-IR and visible) VSFG experiments. The spectrometer must have a resolution of $<6 \text{ cm}^{-1}$ or greater and be capable of analyzing liquid/liquid and/or solid/vapor sample interfaces.

The existing EKSPLA VSFG spectrometers consist of a mode-locked Nd:YAG based oscillator/amplifier, which outputs 1064 nm, 10 Hz pulsed radiation for pumping an optical parametric oscillator/amplifier (OPO/OPA). The OPO/OPA output consists of tunable mid-infrared radiation spanning 2.5-9 μm ($<6 \text{ cm}^{-1}$ FWHM bandwidth) for use at the experiment. A portion of the Nd:YAG oscillator/amplifier is used to pump a second harmonic stage producing 532 nm radiation to be employed at the experiment. In addition to the pump lasers, the existing EKSPLA VSFG spectrometers contain all of the necessary optics, optomechanics, delay stages, gated detection electronics, detectors, software, and sample stages necessary to conduct a VSFG experiment.

B. VSFG Spectrometer Required Specifications:

1. Pump lasers for generating mid-IR and 532 nm radiation in the nonlinear wavelength conversion stage must be based on 1064 nm mode-locked Nd:YAG laser.
2. Variable repetition rate between 10 and 50 Hz.
3. Nonlinear wavelength conversion stage of the VSFG spectrometer must contain all of the components necessary to generate plane-polarized continuously tunable mid-IR radiation from 9000 nm to 16000 nm as well as 532 nm radiation.
4. Pulse length of the two radiation sources (mid-IR and visible beams) employed at the experiment must be commensurate with a $<6 \text{ cm}^{-1}$ full width half maximum spectral pulse width.
5. Contain all optomechanics, optics, lasers, electronics and signal detection instrumentation necessary to conduct a traditional VSFG experiment at the liquid/liquid and/or solid/vapor interface.

6. Single computer controlling all components with unified software control to allow operators to adjust system parameters and acquire a sample VSFG spectrum in the mid-IR wavelength region.
7. Continuously detect and monitor the mid-IR, visible, and VSFG signal radiation during a VSFG experiment.
8. Ability for full for integration with two existing EKSPLA VSFG spectrometer systems currently employed in the laboratory as described above under Section B.
9. Provide VSFG spectrometer installation and optimization
10. Provide onsite system training.

C. Submittals:

In your response to this letter, please provide the following information:

1. Description of how your VSFG spectrometer meets all of the requirements listed under Sections A and B above.
2. Reference information (name, address, telephone number, email address) for at least three educational institutions that are using the spectrometer presented in your response to this letter.
3. Product name
4. Model number
5. Whether you are a: developer and manufacturer or a distributor
6. If you are a distributor, describe in detail what would be provided by the developer or manufacturer and what would be provided by you
7. List the hardware and software that is included in your configuration and provide a price quote for the configuration
8. Identify the list price (in US \$) for the system specified above
9. Identify the warranty period for the Instrumentation
10. Describe any limited service contracts you offer, including an overview of the terms and current pricing
11. Do you charge for telephone support after the expiration of the warranty period?
12. Describe any other options available to the University for the repair of the Instrumentation
13. Describe any technical support you provide to your customers when they need assistance
14. Describe any operational training available
15. Describe any special delivery or installation requirements
16. Provide any other information, documents, or materials you wish

Responses to this letter will be retained by the University for a required retention period and made a part of a file or record that will be open to public inspection. If a response contains any information that is considered a "trade secret" under ORS 192.501(2), you must mark each page containing such information with the following legend: "TRADE SECRET".

The Oregon public records law exempts from disclosure only bona fide trade secrets, and the exemption from disclosure applies “unless the public interest requires disclosure in the particular instance.” Non-disclosure of documents or any portion thereof or information contained therein may depend on official or judicial determinations made pursuant to law. An entire response to this letter marked as “trade secret” is unacceptable, and the response will be returned to you for modification.

Questions about this procurement should be directed to Lawrence Scatena at scat@uoregon.edu.

Thank you for your prompt attention to this letter and your interest in the University of Oregon.

Sincerely,

Lawrence Scatena
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541-346-2501
University of Oregon