SERVICES AGREEMENT
BETWEEN
TEXAS A&M UNIVERSITY
AND
DR. VOLKER DECKERT

This Services Agreement (Agreement) between Texas A&M University, a member of The Texas A&M University System, an agency of the State of Texas, through its Institute For Quantum Science and Engineering ("Texas A&M") and Dr. Volker Deckert ("Provider") is made and entered into by and between Texas A&M and Provider.

Texas A&M and Provider agree as follows:

1. RESEARCH PLAN

Provider will:

A. perform duties as a non-tenure track Institute for Quantum Science and Engineering (IQSE) Faculty Fellow at Texas A&M's Institute for Quantum Science and Engineering. The research plan (the Work) will be in writing and agreed upon by Provider's faculty host or others in the Institute for Quantum Science and Engineering and the Provider. The Work will be a collaboration with Texas A&M faculty and students on research and ideas on the frontier of knowledge in Provider's field and will become a part of this agreement;

B. write an approximately four page report on his/her Work as a Provider suitable for inclusion in the IQSE annual report; and

C. participate, if at all possible, in the TAMU-Princeton-Baylor Summer School on Quantum Science and Engineering on July 21 – 27, 2019 in Casper, Wyoming and the Physics of Quantum Electronics Conference January 4 – 10, 2020 in Snowbird where our group has a strong presence to facilitate scientific discussions and collaboration within the group.

D. Upon execution of this Agreement, all services previously performed by Provider on behalf of Texas A&M and those services included in the research plan, will become part of the Work and will be subject to the terms and conditions of this Agreement.

E. Provider will perform the Work in accordance with Texas A&M Rules and The Texas A&M University System Policies and Regulations, which can be found at http://policies.tamus.edu.

2. TIME FOR COMMENCEMENT AND COMPLETION

It is understood that time is of the essence in this Agreement and that Provider will complete all authorized Work in accordance with the time for performance described for the Work, and in a minimum of time consistent with the highest customs, standards, and practices of Provider's business or profession. Work is to commence based on dates coordinated with Texas A&M during the period of July 1, 2019 through June 30, 2020. This Agreement may be extended only by written agreement executed by both parties.

3. PAYMENT TERMS

A. For the satisfactory performance of the Work, as determined by Texas A&M, Texas A&M will pay Provider at a monthly rate of $10,000 for a total of three months in residence, prorated for 1) the actual time in residence; 2) time for travel to and from Texas A&M; and 3) time in travel to conferences when presenting Texas A&M research in his/her capacity as a Provider of the IQSE. Provider will bill an integer number of days for his/her time.

4. DEFAULT AND TERMINATION

A. In the event of substantial failure by a party hereunder to perform in accordance with the terms hereof, the other party may terminate this Agreement upon 30 days written notice of termination setting forth the nature of the failure (the termination will not be effective if the failure is fully cured prior to the end of the thirty-day period), provided that said failure is through no fault of the terminating party.

B. Texas A&M may, without cause, terminate this Agreement at any time upon giving 30 days advance notice to Provider. Upon termination pursuant to this paragraph, Provider will be entitled to payment of such amount as will compensate Provider for the services satisfactorily performed from the time of the last payment date to the termination date in accordance with this Agreement, provided Provider will have delivered to Texas A&M a final report describing the work completed to the date of termination pursuant to Section 1(B) of this Agreement. Texas A&M will not be required to reimburse Provider for any services performed or expenses incurred after the date of the notice of termination.

5. UNIVERSITY FACILITIES

Texas A&M will provide Provider with office space as needed, to carry out Provider's duties under this Agreement. Any non-consumable items provided by Texas A&M will remain Texas A&M property at the termination of this Agreement unless otherwise agreed in writing. Provider and its employees will be permitted access to and use of the allocated office space, but Texas A&M reserves the right to enter the premises to conduct Texas A&M business, as may be reasonably necessary or for health and safety purposes.

6. PUBLIC INFORMATION

A. Provider acknowledges that Texas A&M is obligated to strictly comply with the Public Information Act, Chapter 552, *Texas Government Code*, in responding to any request for public information pertaining to this Agreement, as well as any other disclosure of information required by applicable Texas law.

B. Upon Texas A&M's written request, Provider will provide specified public information exchanged or created under this Agreement that is not otherwise excepted from disclosure under Chapter 552, *Texas Government Code*, to Texas A&M in a non-proprietary format acceptable to Texas A&M. As used in this provision, "public information" has the meaning assigned Section 552.002, *Texas Government Code*, but only includes information to which Texas A&M has a right of access.

C. Provider acknowledges that Texas A&M may be required to post a copy of the fully executed Agreement on its Internet website in compliance with Section 2261.253(a)(1), *Texas Government Code*.

7. DISPUTE RESOLUTION

The dispute resolution process provided in Chapter 2260, *Texas Government Code*, and the related rules adopted by the Texas Attorney General pursuant to Chapter 2260, will be used by Texas A&M and Provider to attempt to resolve any claim for breach of contract made by Provider that cannot be resolved in the ordinary course of business. Provider will submit written notice of a claim of breach of contract under Chapter 2260 to the University Contracts Officer of Texas A&M, who will examine Provider's claim and any counterclaim and negotiate with Provider in an effort to resolve the claim.

8. CONFLICT OF INTEREST

By executing and/or accepting this Agreement, Provider and each person signing on behalf of Provider certifies, and in the case of a sole proprietorship, partnership or corporation, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief, no member of The Texas A&M University System ("TAMUS") or TAMUS Board of Regents, nor any employee, or person, whose salary is payable in whole or in part by Texas A&M or TAMUS, has direct or indirect financial interest in the award of this Agreement, or in the services to which this Agreement relates, or in any of the profits, real or potential, thereof.

9. OWNERSHIP

Ownership of any intellectual property generated in the course of the Work will be owned as provided under the research plan.

10. CONFIDENTIALITY

Confidentiality of the Work and its related research will be protected and maintained as provided under the research plan.

11. RECORDS

Any records or confidential information provided or disclosed to Provider will be returned or destroyed as provided under the research plan.

12. CERTIFICATIONS

Any certifications, licenses, or other agreements that may be required to perform the Work, will be obtained by the Provider and provided to Texas A&M as provided under the research plan.

13. MISCELLANEOUS

A. **Provider agrees to indemnify and hold harmless Texas A&M from any claim, damage, liability, expense or loss arising out of Provider's negligent or intentional acts or omissions in performance under this Agreement.**

B. Provider will neither assign its rights nor delegate its duties under this Agreement without the prior written consent of Texas A&M.

C. Provider will be an independent contractor, and neither Provider nor any employee of Provider will be deemed to be an agent or employee of Texas A&M. As an independent contractor, Provider will be solely responsible for determining the means and methods for performing the services described. Provider will observe and abide by all applicable laws and regulations, policies and procedures, including but not limited to, those of Texas A&M relative to conduct on its premises.

D. This Agreement constitutes the sole agreement of the parties and supersedes any other oral or written understanding or agreement. This Agreement may not be amended or otherwise altered except upon the written agreement of both parties.

E. The validity of this Agreement and all matters pertaining to this Agreement, including but not limited to, matters of performance, non-performance, breach, remedies, procedures, rights, duties, and interpretation or construction, will be governed and determined by the Constitution and the laws of the State of Texas, except for its conflicts of law statutes and principles. Pursuant to Section 85.18, *Texas Education Code*, venue for any suit filed against Texas A&M will be in the county in which the primary office of the chief executive officer of Texas A&M is located, which is Brazos County, Texas.

F. If Provider is a taxable entity subject to the Texas Franchise Tax (Chapter 171, *Texas Tax Code*), then Provider certifies that it is not currently delinquent in the payment of any franchise (margin) taxes or that Provider is exempt from the payment of franchise (margin) taxes.

G. Any notice required or permitted under this Agreement must be in writing, and will be deemed to be delivered (whether actually received or not) when deposited with the United States Postal Service, postage prepaid, certified mail, return receipt requested, and addressed to the intended recipient at the address set out below. Notice may also be given by regular mail, personal delivery, courier delivery, facsimile transmission, email, or other commercially reasonably means and will be effective when actually received.

Texas A&M and Provider can change their respective notice address by sending to the other party a notice of the new address. Notices should be addressed as follows:

Texas A&M:

Texas A&M University
Institute for Quantum Science and Engineering
College Station, TX 77843
ATTN: Marlan Scully
Telephone: (979) 862-2333
Fax: (979) 458-1235
Email: scully@tamu.edu

Provider:

Deckert, Volker, Prof. Dr., 12.08.1965, Professor (W3)
Institute of Physical Chemistry and Abbe Center of Photonics, Friedrich Schiller University Jena,
Helmholtzweg 4
Jena, GERMANY 07743
Phone: +49 (0) 3641 206 113;
E-mail: Volker.deckert@uni-jena.de

H. Texas A&M may request a provider to perform a criminal background check on any employee and/or representative of Provider who conducts business pursuant to this Agreement on the campus of Texas A&M.

I. Under Section 231.006, *Texas Family Code*, the vendor or applicant certifies that the individual or business entity named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

J. Pursuant to Sections 2107.008 and 2252.903, *Texas Government Code*, Provider agrees that any payments owing to Provider under this Agreement may be applied directly toward certain debts or delinquencies that Provider owes the State of Texas or any agency of the State of Texas regardless of when they arise, until such debts or delinquencies are paid in full.

K. Provider acknowledges and understands that Section 2252.901, *Texas Government Code*, prohibits Texas A&M from using state appropriated funds to enter into any employment contract, consulting contract, or professional services contract with any individual who has been previously employed, as an employee, by the agency within the past twelve (12) months. If Provider is an individual, by signing this Agreement, Provider certifies that Section 2252.901, *Texas Government Code,* does not prohibit the use of state appropriated funds for satisfying the payment obligations herein.

L. Headings appear solely for convenience of reference. Such headings are not part of this Agreement and will not be used to construe it.

M. Neither party is required to perform any term, condition, or covenant of this Agreement, if performance is prevented or delayed by a natural occurrence, a fire, an act of God, an act of terrorism, or other similar occurrence, the cause of which is not reasonably within the control of such party and which by due diligence it is unable to prevent or overcome.

N. By executing this Agreement, Provider certifies it does not and will not, during the performance of this contract, boycott Israel. Provider acknowledges this Agreement may be terminated if this certification is inaccurate.

O. Pursuant to Subchapter F, Chapter 2252, *Texas Government Code*, Provider certifies it is not engaged in business with Iran, Sudan, or a foreign terrorist organization. Provider acknowledges this Agreement may be terminated if this certification is inaccurate.

P. By executing this Agreement, Provider and each person signing on behalf of Provider certifies, and in the case of a sole proprietorship, partnership or corporation, each party thereto certifies as to its own organization, that to the best of their knowledge and belief, no member of Texas A&M, nor any employee, or person, whose salary is payable in whole or in part by Texas A&M, has direct or indirect financial interest in the award of this Agreement, or in the services to which this Agreement relates, or in any of the profits, real or potential, thereof.

Q. Provider expressly acknowledges that Texas A&M is an agency of the State of Texas and nothing in this Agreement will be construed as a waiver or relinquishment by Texas A&M of its right to claim such exemptions, privileges, and immunities as may be provided by law.

R. Performance by Texas A&M under this Agreement may be dependent upon the appropriation and allotment of funds by the Texas State Legislature (the "Legislature"). If the Legislature fails to appropriate or allot the necessary funds, Texas A&M will issue written notice to Provider and Texas A&M may terminate this Agreement without further duty or obligation hereunder. Provider acknowledges that appropriation of funds is beyond the control of Texas A&M.

S. Under Section 2155.004, *Texas Government Code*, the vendor certifies that the individual or business entity named in this bid or contract is not ineligible to receive the specified contract and acknowledges that this contract may be terminated and payment withheld if this certification is inaccurate.

T. Provider understands that acceptance of funds under this Agreement constitutes acceptance of the authority of the Texas State Auditor's Office, or any successor agency (collectively, "Auditor"), to conduct an audit or investigation in connection with those funds pursuant to Section 51.9335(c), *Texas Education Code*. Provider agrees to cooperate with the Auditor in the conduct of the audit or investigation, including without limitation, providing all records requested. Provider will include this provision in all contracts with permitted subcontractors.

U. Each provision of this Agreement is severable. If any provision is rendered invalid or unenforceable by statute or regulations or declared null and void by any court of competent jurisdiction, the remaining provisions will remain in full force and effect if the essential terms of this Agreement remain valid, legal, and enforceable.

The parties have signed this Agreement on the date indicated below their signatures and is effective on the date of the last party to sign.

TEXAS A&M UNIVERSITY	**PROVIDER**
Signature	Signature
Robert C. Bounds	Prof., Dr. Volker Deckert
Name	Name
Director, Procurement Services	Professor (W3) Physical Chemistry, Friedrich Schiller University Jena Germany
Title	Title
16 Jul 2019	
Date	Date

APPENDIX A
RESEARCH PLAN

Prof. Volker Deckert is a Fellow of the Royal Society of Chemistry and the world's best physical chemist when it comes to subnanometer resolution tip-enhanced Raman spectroscopy applied to, e.g., imaging of single-stranded DNA with single base resolution. He will provide consultation and collaboration on these and related topics. Specifically he will bring his knowledge and expertise regarding nanotechnology, physical chemistry and spectroscopy to bear on current problems of IQSE research in such areas as emerging quantum technologies. He will also give a series of lectures on the topic.

Curriculum Vitae - Prof. Dr. Volker Deckert

- **Deckert, Volker**, Prof. Dr., 12.08.1965, Professor (W3)
  Institute of Physical Chemistry and Abbe Center of Photonics, Friedrich Schiller University Jena, Helmholtzweg 4, 07743 Jena
  Leibniz Institute of Photonic Technology – IPHT, Albert-Einstein-Str. 9, 07745 Jena
  Phone: +49 (0) 3641 206 113; E-mail: Volker.deckert@uni-jena.de
  Web: www.ters.uni-jena.de

- ***Personal data***

Date/ Place of birth	12.08.1965 (Erlenbach a. Main)
Marital status	married, three children

- ***University education with degree***
  Diploma in chemistry, University of Würzburg (06/1991)
  Study of chemistry, University of Würzburg (10/1985-06/1991)

- ***Scientific degrees***
  Venia legendi in chemistry, Friedrich Schiller University Jena (2010)
  Habilitation in Chemistry, ETH Zürich (2001)
  PhD in chemistry, University of Würzburg (1994)
  PhD studies, University of Würzburg (1991-1994; supervisor Prof. W. Kiefer)

- ***Professional career since final degree***

6/2013-to date	Professor (W3) Physical Chemistry, Friedrich Schiller University Jena
4/2009-to date	Head of Nanoscopy Department, Leibniz Institute of Photonic Technology, Jena and Head of research group Nanospectroscopy Friedrich Schiller University Jena.
2002-2009	Head of "Proteomics" Department ISAS Dortmund and lecturer Physical Chemistry TU Dortmund
2002	Alexander von Humboldt Awardee, TU Dresden
1996-2001	"Oberassistent" (Lecturer) Laboratory of Organic Chemistry, ETH Zürich
1994-1995	Postdoc University of Tokyo, Japan and Kanagawa Academy of Science and Technology, Kawasaki, Japan (Prof. H. Hamaguchi)
1993-1998	Freelance programming: Commercial device drivers for spectroscopy software (MAPS™ Photometrics, Ltd.) used in combination with scientific CCD cameras.

- ***Administration duties***
  Board of trustees "Forschungscampus Infectognostics"
  Elected member of faculty council (Faculty for Chemistry and Earth Sciences of the Friedrich-Schiller-University Jena)
  Leibniz delegate (section D) for the IPHT

Committee member of several professor selection committees

- ***Awards / Honours***

  Sofia-Kovalevskaya Award - Alexander v. Humboldt Foundation (2001)
  Bunsen-Kirchhoff-Award GDCh (2006)
  Research Award of the Free State of Thuringia (2012)
  Initiative „Land of Ideas" (BMBF) (2012)
  Fellow of the Society of Applied Spectroscopy (2012)
  Adjunkt Professor at the University of Nebraska, Omaha (2012)
  Charles Mann Award for Applied Spectroscopy (2013)
  Fellow of the Royal Society of Chemistry (2015)
  Raman Innovation Award at the XXVth International Conference on Raman Spectroscopy (2016)

- ***Professional Memberships***

  German Chemical Society – GDCh
  German Physical Society – DPG
  Fellow Royal Society of Chemistry – RSC
  Fellow Society of Applied Spectroscopy – SAS
  Optical Society of America – OSA
  The Coblentz Society

- ***Editorial duties / boards:***

  Editorial board member:
  Journal of Raman Spectroscopy
  Applied Spectroscopy
  Scientific Reports
  Editorial advisory board member:
  The Analyst
  Guest editor:
  J. Raman Spectroscopy "Hamaguchi commemorative issue" 2008
  J. Raman Spectroscopy "Special Issue on Tip-enhanced Raman Spectroscopy" Oct 2009
  J. Biophotonics "Special issue in topical problems of biophotonics" 2010

  International Conferences:
  Steering Committee International Conference on Raman Spectroscopy – ICORS (since 2010)
  Program committee member International Conference on Near-field Optics, Nanophotonics and Related Techniques (NFO) (since 2010)
  Program Committee: "European Conference on Biomedical Optics (ECBO)" Munich 2009/2011
  Program Committee "Topical Problems of Biophotonics 2009" Nizhny Novgorod (2009)
  Session organizer FACSS/SCIX (2010-2017)
  Session organizer Pittcon (2014/2015/2018)
  Organizer with Prof. Dr. J. Popp: International Conference on Raman Spectroscopy – ICORS 2014

- ***Referee Duties***

  Publications (selection)
  Science, Nature, Nature Methods, Chemical Reviews, ACS Nano, Nano Letters, Angew. Chem., etc.
  Proposals

DFG, AvH, ERC, NSERC (Canada), RSC (UK), ANR (France), NCN (Poland), NWO (The Netherlands)

- ***Selected Publications / Patents / Oral presentations***

ResearcherID: I-5537-2016 / ORCID: 0000-0002-0173-7974

5 selected refereed publications

1. S. Trautmann, J. Aizpurua, I. Götz, A. Undisz, J. Dellith, H. Schneidewind, M. Rettenmayr and V. Deckert*. „A classical description of subnanometer resolution by atomic features in metallic structures" *Nanoscale* 9, 391(2017).
2. F. Latorre, S. Kupfer, T. Bocklitz, D. Kinzel, S. Trautmann, S. Gräfe, and V. Deckert*, "Spatial resolution of tip-enhanced Raman spectroscopy - DFT assessment of the chemical effect," Nanoscale 8, 10229 (2016).
3. E.M. van Schrojenstein Lantman, T. Deckert-Gaudig, A.J.G. Mank, V. Deckert*, and B.M. Weckhuysen*, "Catalytic processes monitored at the nanoscale with tip-enhanced Raman spectroscopy," Nature Nanotechnol. 7, 583 (2012).
4. B.R. Wood, E. Bailo, M.A. Khiavi, L. Tilley, S. Deed, T. Deckert-Gaudig, D. McNaughton, and V. Deckert*, "Tip-Enhanced Raman Scattering (TERS) from Hemozoin Crystals within a Sectioned Erythrocyte," Nano Lett. 11, 1868 (2011).
5. R. Stockle, Y. Suh, V. Deckert*, R. Zenobi*. "Nanoscale chemical analysis by tip-enhanced Raman spectroscopy". Chem Phys Lett. 2000. 318, 131 (2000)

5 prominent recent invited lectures

1. Developments in Near-Field Raman Scattering, *Int. Conf. Raman Spectrosc. - XXIV-ICORS,* Jeju (2018) - keynote
2. Plasmon induced polymerization using a TERS approach: a platform for nanostructured 2D/1D material production, *Faraday Discussion meeting on SERS*, Glasgow (2017)
3. High Resolution Tip-Enhanced Raman Spectroscopy Current State of Theory and Experiment, *International Conference on Surface Plasmon Photonics*, Taipeh, Taiwan (2017)
4. Plasmon Enhanced Probe Spectroscopies - Current State of Theory and Experiment, Physics of Quantum Engineering – PQE, Snowbird (2017) – plenary
5. Lateral resolution in tip-enhanced Raman scattering, *Raman- Fest*, Berlin (2016)

Patents

1. Verfahren und Vorrichtung zur Messung zeitlich modulierter Spektren, V. Deckert, R. Heming, German Patent DE 10 2007 000 988 (2007).
2. Verfahren und Vorrichtung zur Trennung eines Analytgemisches und zur Detektion der Analytsubstanzen mittels kontinuierlicher trägerfreier Elektrophorese, M. Becker, C. Budich, V. Deckert, D. Janasek, German Patent DE 102008032164 A1(2008)
3. Verfahren zur Identifikation von Einzelviren in einer Probe, J. Popp, V. Deckert, D. Naumann, R. Möller, D. Cialla. DE102008047240A1(2008)
4. Verfahren zur Ermittlung der Sequenz von Biopolymeren, V. Deckert, M. Zeisberger, DE102012024203A1 (2012).