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CURRICULUM VITAE

GREGORY S. ENGEL

THE UNIVERSITY OF CHICAGO

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EDUCATION

Ph.D. Department of Chemistry and Chemical Biology, Harvard University, June 2004
Dissertation: "Cavity Enhanced Spectroscopic Techniques for *in situ* Measurement: Pushing the Limits of Sensitivity"
A.M. Department of Chemistry and Chemical Biology, Harvard University, June 2001
A.B. *Summa cum Laude*, Department of Chemistry, Princeton University, June 1999
Thesis: "Cavity Ringdown Spectroscopy in a Brewster's Angle Prism Resonator"
Certificate of Proficiency, Program in Computational and Applied Mathematics, Princeton University, June 1999

PROFESSIONAL EXPERIENCE

Professor of Molecular Engineering, The University of Chicago, 2022-
Pritzker School of Molecular Engineering
Professor of Chemistry, The University of Chicago, 2014-
Department of Chemistry, James Franck Institute, Institute for Biophysical Dynamics and The College
Associate Professor, The University of Chicago, 2012-2014
Department of Chemistry, The James Franck Institute, The Institute for Biophysical Dynamics and The College
Fellow of the Institute for Molecular Engineering
Assistant Professor, The University of Chicago, July 2007-2012
Department of Chemistry, The James Franck Institute, and The College
Miller Research Fellow, University of California, Berkeley, 2005-2007
Department of Chemistry, UC Berkeley
Physical Biosciences Division, Lawrence Berkeley National Laboratory
Two-Dimensional Femtosecond Electronic Spectroscopy of Photosynthetic Complexes in collaboration with Prof. Graham Fleming
Postdoctoral Research Fellow, Harvard University, 2004-2005
Department of Engineering and Applied Science
Miniaturized Instrumentation for *in situ* Spectroscopic Measurements in Prof. James Anderson's group
Consultant, Institute for Defense Analysis, Alexandria, VA, 2013-present
Consultant, Ionis Pharmaceuticals Inc, Carlsbad, CA, 2020-present
Technical Consultant, NovaWave Technologies, Redwood City, CA, 2003-2007
Real time statistical analysis of high speed data streams

LEADERSHIP EXPERIENCE

Director, NSF QuBBE QLCI spanning UChicago, CSU, UIC and Harvard (2021-2026)

NSF QuBBE is a cross-disciplinary effort to create a new generation of quantum sensors for Biology, Biophysics, and Bioengineering. This $25M center involves 23 faculty spanning Medicine, Physics, Chemistry, Biology, and Engineering.

Co-Director, Biophysical Sciences Graduate Program (2013 - present)

BPHYS is a interdisciplinary graduate program involving 70 faculty and 40 students. Students choose two advisors, one from the physical sciences and one from the biological sciences and chart a new path at the interface between these fields.

Officer of ACS Physical Chemistry Division (2013-2018; chair in 2016-2017)

Spokesperson of the Committee of the College Council (2017-2020, 2022-2023). The college council is the parliamentary body that oversees academic matters in UChicago's College. I was elected to the council, then elected to the Committee of the Council which engages with the Dean regularly, then elected as spokesperson of the Committee of the Council for the duration of my three year term.

TEACHING EXPERIENCE

Professor, Department of Chemistry, The University of Chicago, 2007-present

Quantum Mechanics, Fall 2016
Experimental Physical Chemistry, Winter 2009, 2010, 2012, 2016
Molecular Mechanisms of Human Disease, Winter 2015, 2016; Spring 2017, 2018, 2019, 2021, 2022
Honors General Chemistry, Autumn 2009, 2022
Graduate Quantum Mechanics, Autumn 2007, 2008, 2010, 2012, 2013, and 2019
Graduate Modern and Nonlinear Spectroscopy, Spring 2011
General Chemistry, Autumn 2011,2021 Winter 2013, 2014, 2015, 2019, 2020

Teaching Fellow, Department of Chemistry, Harvard University, 1999-2004

Five semesters of Undergraduate Quantum Chemistry and Mechanics
Four semesters of Undergraduate/Graduate Statistical Mechanics
One semester of Graduate Chemical Kinetics

FELLOWSHIPS, AWARDS, AND NOTEWORTHY ACHIEVEMENTS

Fellow, American Chemical Society 2023-
Bernstein Lecturer, UCLA, 2019
World Economic Forum Young Scientist (one of the 50 top scientists under 40), 2017-2018
Vannevar Bush Fellowship, 2016-2019
National Security Science and Engineering Faculty Fellowship, 2014-2016
FACSS Innovation Award, SciX Conference, 2013
IDA Defense Science Study Group (DSSG), 2013-2014
E. Bright Wilson Lecturer at Harvard University Chemistry Department, 2012
Llewellyn John and Harriet Manchester Quantrell Award for Undergraduate Teaching, 2012
Sloan Research Fellow, 2012
Camille Dreyfus Teacher-Scholar Award, 2012
Coblentz Award, Coblentz Society, 2012
National Academies of Science, Kavli Fellow, Japanese-American Frontiers of Science, 2010
Defense Threat Reduction Agency (DTRA) Young Investigator Award, 2010
Defense Advanced Research Project Administration (DARPA) Young Faculty Award, 2010
Presidential Early Career Award in Science and Engineering (PECASE), 2010

Searle Scholar, 2009
Air Force Office of Scientific Research (AFOSR) Young Investigator Award, 2008
Scientific American "SciAm 50" Top Leaders in Research for 2007
Dreyfus Foundation New Faculty Award 2007
Miller Institute for Research in Basic Science Fellowship (2005-2007)
EPA Science to Achieve Results (STAR) Fellowship (2003-2004)
NSF Graduate Research Fellowship (1999-2002)
Dudley Herschbach Award for Teaching and Departmental Service (First Recipient, Fall 2002)
McKay Prize in Physical Chemistry, Princeton University, June 1999
Eagle Scout Award with Bronze Palm, October 1994

PROFESSIONAL MEMBERSHIPS AND SERVICE

Organization for Economic Cooperation and Development (OECD) Global Forum on Technology (nominated by NSF, appointed by State Dept.), (2023-2024)
Editorial Advisory Board, Journal of Physical Chemistry Letters (2021-2023)
IUPAC Division I Nominating Committee (2018-2024)
Editorial Advisory Board, Journal of Physical Chemistry Letters (2019-2021)
Editorial Board, Chemical Physics Letters (2018-2021)
Officer of ACS Physical Chemistry Division (2013-2018; chair in 2016-2017)
APS Division of Laser Science Nominating Committee (2016-2017)
Editorial Advisory Board, Journal of Physical Chemistry (2014-2016)
Coblentz Award Selection Committee (2013-2015)
Executive Committee of the American Physical Society (APS) Division of Laser Science (2011-2014)
Co-organized QUEBS 2011 Conference in Ulm, Germany (2011)
Conference Chair and Organizer of the Midwestern Photosynthesis 2010 Conference (2010)
Executive Committee of the ACS, Biophysics Subdivision (2010-2012; Chair 2011-2012)
Affiliate of the DOE Photosynthetic Antenna EFRC at Washington Univ. of St. Louis (2010-)
Program Committee for QUEBS 2010 Conference
Co-organized Biologically Inspired Solar Light Harvesting Session of the APS March Meeting (2008)
American Chemical Society (2007-)
American Physical Society (2007-)
Optical Society of America (2004-)
Biophysical Society of America (2010-)

UNIVERSITY OF CHICAGO SERVICE

Current:

Director, NSF QuBBE QLCI spanning UChicago, CSU, UIC and Harvard (2021-2026)
Committee of the Council of the University Senate (elected) (2024-2025)
Council of the University Senate (elected) (2024-2027)
College Area Disciplinary Committee (2022-)
James Franck Institute, Appointments Committee (2023-2024)
Chemistry Department, Strategy Committee (2023-2024)
Quantum Fellows Committee (2023-2024)
Committee of the College Council (elected), (2021-2024)
College Council (elected), (2021-2024)
College Latin Honors Committee, Chair (2020-)

College Center for Research and Fellowships Faculty Advisory Committee (2019-)
Chemistry Communications/Social Media Committee (2022-2024)
PSD Executive Committee (2021-)
Laboratory Procurement Advisory Committee (2018-)
College British and Irish Scholarships Committee (2015-)
Biophysical Sciences Graduate Program Co-Director (2013 -)
Biophysical Sciences Admissions and Recruiting Chair (2011-)
Biophysical Sciences Program Admissions Committee (2009-)

Past:
University of Chicago, Spokesman of the Committee of the College Council (elected), (2017-2020,2022-2023)
University of Chicago, Committee of the College Council (elected), (2017-2020, 2021-2024)
University of Chicago, College Council (elected), (2017-2020, 2021-2024)
Council of the University Senate (elected) (2020-2023)
Molecular Engineering Search Committee for Climate Engineering (2022-2023)
Chemistry Teacher Matters Committee (2022-2023)
PSD IBD Director Canvassing Committee (2021-2022)
Chemistry Physical Science (senior) Instructional Professor Hiring Committee, chair (2021-2022)
Chemistry Development Committee (2021)
Fellow of the Institute for Molecular Engineering (2013-2022)
University of Chicago, PSD IBD Future Planning Committee, (2019-2021)
JFI Promotion and Advancement Committee (2018-2021)
University of Chicago, Marshall & Rhodes Process Review Committee (2020-2021)
Chemistry Strategic Planning Committee, Chair (2020-2021)
Chemistry Physical Science Teaching Professor Hiring Committee (2020-2021)
Chemistry Admissions Committee (2019-2020)
Chemistry Promotion and Advancement Committee (2019-2020)
JFI Director Canvassing Committee (2018)
Academic Honors Review Committee Chair (2018-2019)
JFI Space Committee (2017-2018)
University of Chicago, Council of the University Senate (elected) (2016-2019)
PSD-IME Advisory Board Chair for the Industrial Associates Program (2015-2018)
JFI Machine Shop Committee Chair (2013-2018)
Physical Sciences Divisional Fundraising Committee (2013)
University Board on Computing Activities and Services (2013-2016, Chairman of Board 2014-2016)
PSD Space Committee (2013)
Facilities Hiring Committee (2013)
Committee on Institutional Collaboration – Academic Leadership Program (2012-2013)
UChicago Academic Leadership Program (2012-2013)
Chemistry Teaching Matters Committee (2012-2014)
Biophysical Sciences Advancement Committee (2012-2013)
JFI Events Committee Chair (2011-2018)
Physical Sciences Division *ad hoc* Committee to Select New Master (2012)
JFI New Appointments Committee (2011-2013)
Chemistry Recruiting Committee (2007-2011) Chair (2007-2011)
JFI Seminar Coordinator (2009-2011)

Provost's Committee for Establishment of the Institute for Molecular Engineering (2009-2010)
JFI Website Committee (2007-2009)
JFI Secretary (2007-2008)
CPCS Building Design Committee (2008-2009)
Institute for Molecular Engineering Building Design Committee (2009-2010)

RECENT GROUP ALUMNI

Will Hollingsworth (postdoc), Intel Corp
Marco Allodi (postdoc), Bain and Co
Brian Rolczynski (postdoc), Naval Research Laboatory
Wave Wang (postdoc), now Assistant Professor, Xiamen University
Tom Jarvis (postdoc) Assistant Professor, East Kentucky University
Shu-Hao Yeh (postdoc) Lowes Corp
Graham Griffin (postdoc), now Assistant Professor, DePaul University
Elad Harel (postdoc), now Associate Professor, Michigan State University
Gitt Panitchyankoon, Ph.D., now at Bain and Co.
Kelly A Fransted, Ph.D., now at Argonne Nat'l Laboratory
Justin Caram, Ph.D., now Assistant Professor at UCLA
Phillip Long, Ph.D., now at McKinsey and Co.
Dugan Hayes, Ph.D., now Assistant Professor at University of Rhode Island
Andrew Fidler, Ph.D., now a Director's Fellow at Los Alamos Nat'l Laboratory
Kenley Pelzer, Ph.D., now at Argonne Nat'l Laboratory
Ved Singh, Ph.D., now an engineer at Intel Corp
Peter Dahlberg, Ph.D., now a Panofsky Fellow at SLAC/Stanford Unversity
Moira Flanagan, Ph.D., now at Amherst College
Lili Wang, Ph.D., now a postdoc at MIT
Haibin Zheng, Ph.D.
John Otto, Ph.D., now an engineer at Intel Corp
Nicholas Williams, Ph.D., Lab Director at Origo Labs Corp
Sara Massey, Ph.D., now Assistant Professor at Southwestern University
Sara Sohail, Ph.D., now Assistant Professor at Swarthmore
Ryan Wood, Ph.D., now at Intel Corp
Richard Mazuski, Ph.D, now at McKinsey and Co
Polina Navotnaya, Ph.D., now at Lam Research Inc.
Po-Chieh Ting, Ph.D., now at EPA
Sarah Zinn, Ph.D., now at UCLA
Lawson Lloyd, Ph.D., now at the Fritz Haber Institute, Berlin
Jake Higgins, Ph.D., now at NIST, UC Boulder
Elizabeth Bain, Ph.D., now at Intel Corp.
Sidhartha Sohoni, Ph.D., now at UC Berkeley
Sara Wichner, S.B. now at Genentech
Nicholas Lewis, S.B. now Postdoc, UChicago
Hunter Davis, S.B., now Graduate Student at CalTech
Tobias Gellen, S.B., now Graduate Student at NYU
Ryan McGillicuddy, S.B. now Graduate Student at Harvard
Michael Westberg Sorenson, Fulbright Fellow, S.M. to Graduate Student at Aachen
Graham Norris, S.B., now Graduate Student at ETH
Ruvim Ginzburg, S.B., researcher at University of Toronto

Jonathan Michelsen, S.B. now Graduate Student at CalTech
Matthew Talaga, S.B.
Dario Nunez, S.B.
Vito Rizzi, S.B.
Alice Zhang, S.B.
James Hayman, S.B., now at NYU
Nicholas Cleland, S.B., now at University of Colorado, Medical School
Karen Ji, S.B., now at Northwestern Chemistry Grad School
Kirk Lancaster, S.B., now a Knight Hennessey Fellow at Stanford Law
R.J. Bogden, S.B.
Nate McConnell, S.B.
Dario Nunez, S.B.
Carlos Olivares, S.B.
Alice Zhang, S.B.
Karen Ji, S.B., now at Northwestern Univ.
Ainsley Iwanicki, S.B., now at MIT
Hugh Cairney, S.B., now at MIT
Thomas Gao, S.M.
Alexander Linkin, S.M.
Nanzhu Li, S.M
Sami Abdelhadi, S.M. now at Plastipak Corp
Lane Gunderman, now at MIT Grad School

PATENTS AND PATENT APPLICATIONS

Systems and Methods for Optical Resonance Imaging, GS Engel and MA Allodi. US Patent App. 16/181,738. Published 2019-05-09

Real-Time Mapping of Electronic Structure with Single-Shot Two-Dimensional Electronic Spectroscopy. Elad Harel and Gregory S. Engel. US9001320B2 Granted 2015-04-07. Published 2015-04-07

PUBLICATIONS

109. B.C. Li,* K. Lin,* P.-J. Wu, A. Gupta, K. Peng, S. Sohoni, J.C. Ondry, Z. Zhou, C.C. Bellora, Y.J. Ryu, S. Chariton, D.J. Gosztola, V.B. Prakapenka, R.D. Schaller, D.V. Talapin, E. Rabani, G.S. Engel, "Exciton-phonon Coupling and Phonon-assisted Exciton Relaxation Dynamics in In1-xGaxP Quantum Dots", Nature Communications (accepted) 2025

108. B.C. Li, H. Cairney, Y. Jin, J. Park, S. Sohoni, L.T. Lloyd, Y.Liu, J.E. Jureller, Y.J. Ryu, S. Chariton, V.B. Prakapenka, R.D. Schaller, G. Galli, and G.S. Engel, "Connectivity-dependent Exciton-phonon Coupling in Cesium Bismuth Halide Quantum Dots", ACS Nano 19, 10359–10368 2025

107. H. Gestsson, C. Nation, J.S. Higgins, G.S. Engel, and A. Olaya-Castro , "Non-perturbative exciton transfer rate analysis of the Fenna-Matthews-Olson photosynthetic complex under reducing and oxidizing conditions", JCP 162, 114114 2025

106. S.H. Sohail, S. Sohoni, P.-C. Ting, L.R. Fantz, S.M. Abdulhadi, C. MacGregor-Chatwin, A. Hitchcock, C.N. Hunter, G.S. Engel, and S.C. Massey, "Functional Connectivity of Red Chlorophylls in Cyanobacterial Photosystem I Revealed by Fluence-Dependent Transient Absorption", J. Phys. Chem B 129, 3191–3197 2025

105. I. Ghosh, Q. Shen, P.-J. Wu, and G.S. Engel, "Vibronic Conical Intersection Trajectory Signatures in Wave Packet Coherences", JPCL 15, 12494-12500 2024

104. S. Sohoni,* P.-J. Wu,* Q. Shen, L.T. Lloyd, C. Macgregor-Chatwin, A. Hitchcock, and G.S. Engel, "Resonant Vibrational Enhancement of Downhill Energy Transfer in the C-Phycocyanin Chromophore Dimer", JPCL 15, 11569–11576 2024.

103. P.-J. Wu,* S. Sohoni,* and G.S. Engel, "Vibrational Relaxation Completes the Excitation Energy Transfer and Localization of Vibronic Excitons in Allophycocyanin α84 - β84", JPCL 15, 11577–11586 2024

102. S. Sohoni, I. Ghosh, G.T. Nash, C.A. Jones, L.T. Lloyd, B.C. Li, K.L. Ji, Z. Wang, W. Lin, and G.S. Engel, "Optically accessible long-lived electronic biexcitons at room temperature in strongly coupled H- aggregates", Nat. Comm. 15, 8280 2024.

101. W. Zhen, D.W. Kang, Y. Fan, Z. Wang, T. Germanas, G.T. Nash, Q. Shen, R. Leech, J. Li, G.S. Engel, R.R. Weichselbaum, and W. Lin, "Simultaneous Protonation and Metalation of a Porphyrin Covalent Organic Framework Enhance Photodynamic Therapy", JACS 146, 16609–16618 2024

100. E. Fresch, F.V.A. Camargo, Q. Shen, C.C. Bellora, T. Pullerits, G.S. Engel, G. Cerullo, and E. Collini, "Two-dimensional electronic spectroscopy", Nature Reviews Methods Primers 3 84 2023.

99. I. Avdic, L.M. Sager-Smith, I. Ghosh, O.C. Wedig, J.S. Higgins, G.S. Engel, and D.A. Mazziotti, "Quantum sensing using multi-qubit quantum systems and the Pauli polytope", Phys. Rev. Research 5, 043097 2023.

98. S. Sohoni, L.T. Lloyd, A. Hitchcock, C. MacGregor-Chatwin, A. Iwanicki, I. Ghosh, Q. Shen, C.N. Hunter, and G.S. Engel, "The Phycobilisome's Exciton Transfer Efficiency Relies on an Energetic Funnel Driven by Chromophore-Linker Protein Interactions", JACS 145, 11659–11668 2023.

97. G. Lin, G.T. Nash, T. Luo, I. Ghosh, S. Sohoni, A.J. Christofferson, G. Liu, G.S. Engel, W. Lin, "Two-Dimensional Nanosonosensitizers Facilitate Energy Transfer to Enhance Sonodynamic Therapy", Advanced Materials, 35, 2212069 2023.

96. J.S. Higgins, A.R. Dardia, C.J. Ndife, L.T. Lloyd, E.M. Bain, and G.S. Engel, "Leveraging Dynamical Symmetries in Two-Dimensional Electronic Spectra to Extract Population Transfer Pathways", J. Phys. Chem. A 126 3594–3603 2022.

95. P. Navotnaya,* S. Sohoni,* L.T. Lloyd, S. Abdulhadi, P.-C. Ting, J.S. Higgins, and G.S. Engel, "Annihilation of Excess Excitations along Phycocyanin Rods Precedes Downhill Flow to Allophycocyanin Cores in the Phycobilisome of *Synechococcus elongatus* PCC 7942", JPCB 126 23–29 2022.

94. J.S. Higgins,* M.A. Allodi,* L.T. Lloyd, J.P. Otto, S.H. Sohail, R.G. Saer, R.E. Wood, S.C. Massey, P.-C. Ting, R.E. Blankenship, G.S. Engel, "Redox conditions correlated with vibronic coupling modulate quantum beats in photosynthetic pigment-protein complexes", PNAS 118 e2112817118 2021.

93. J.S. Higgins, W.R. Hollingsworth, L.T. Lloyd, and G.S. Engel, "Quantum Coherence in Chemical and Photobiological Systems", Emerging Trends in Chemical Applications of Lasers, ACS Symposium Series #1398, Edited by M.R. Berman, L. Young, and H.-L. Dai, ACS Books 2021.

92. M. Onizhuk,* S. Sohoni,* G.A. Galli, and G.S. Engel, "Spatial Patterns of Light-harvesting Antenna Complex Arrangements Tune the Transfer-to-trap Efficiency of Excitons in Purple Bacteria", JPCL 12, 6967–6973 2021

91. L.T. Lloyd, R.E. Wood, F. Mujid, S. Sohoni, K.L. Ji, P.-C. Ting, J.S. Higgins, J. Park, and G.S. Engel, "Sub-10 fs Intervalley Exciton Coupling in Monolayer MoS2 Revealed by Helicity-Resolved Two-Dimensional Electronic Spectroscopy", ACS Nano 15 10253–10263 2021

90. B.S. Rolczynski, S.-H. Yeh, P. Navotnaya, L.T. Lloyd, A.R. Ginzburg, H. Zheng, M.A. Allodi, J.P. Otto, K. Ashraf, A. Gardiner, R. Cogdell, S. Kais, and G.S. Engel, "Time-domain Line-shape Analysis from 2D Spectroscopy to Precisely Determine Hamiltonian Parameters for a Photosynthetic Complex", J. Phys. Chem. B 125 2812 (2021).

89. J.S. Higgins, L.T. Lloyd, S.H. Sohail, M.A. Allodi, J.P. Otto, R.G. Saer, R.E. Wood, S.C. Massey, P.-C. Ting, R.E. Blankenship, and G.S. Engel, "Photosynthesis tunes quantum mechanical mixing of electronic and vibrational states to steer exciton energy transfer", PNAS 118 e2018240118 (2021)

88. Y. Kim, F. Bertagna, E.M. D'Souza, D.J. Heyes, L.O. Johannissen, E.T. Nery, A. Pantelias, A. Sanchez-Pedreño Jimenez, L. Slocombe, M.G. Spencer, J. Al-Khalili, G.S. Engel, S. Hay, S.M. Hingley-Wilson, K. Jeevaratnam, A.R. Jones, D.R. Kattnig, R. Lewis, M. Sacchi, N.S. Scrutton, S.R.P. Silva, and J. McFadden, "Quantum Biology: An Update and Perspective", Quantum Rep. 3, 80-126 2021.

87. L.T. Lloyd, R.E. Wood, M.A. Allodi, S. Sohoni, J.S. Higgins, J.P. Otto, and G.S Engel, "Leveraging scatter in two-dimensional spectroscopy: passive phase drift correction enables a global phasing protocol", Optics Express 28, 32869-328 (2020)

86. S.H. Sohail, J.P. Otto, P.D. Cunningham, Y.C. Kim, R.E. Wood, M.A. Allodi, J.S. Higgins, J.S. Melinger, and G.S. Engel, "DNA scaffold supports long-lived vibronic coherence in an indodicarbocyanine (Cy5) dimer", Chemical Science 11, 8546-8557 (2020)

85. R.J. Mazuski*, S.A. Díaz*, R.E. Wood, L.T. Lloyd, W.P. Klein, D. Mathur, J.S. Melinger, G.S. Engel, and Igor L. Medintz, "Ultrafast Excitation Transfer in Cy5 DNA Photonic Wires Displays Dye Conjugation and Excitation Energy Dependency", The Journal of Physical Chemistry Letters 11, 4163-4172 (2020)

84. R.E Wood, L.T. Lloyd, F. Mujid, L. Wang, M.A. Allodi, H. Gao, R.J. Mazuski, P.-C. Ting, S. Xie, J. Park, and G.S. Engel, "Evidence for the Dominance of Carrier-Induced Band Gap Renormalization over Biexciton Formation in Cryogenic Ultrafast Experiments on MoS2 Monolayers", J. Phys. Chem. Lett. 11, 2658-2666 2020

83. R.E Wood, L.T. Lloyd, F. Mujid, L. Wang, M.A. Allodi, H. Gao, R.J. Mazuski, P.-C. Ting, S. Xie, J. Park, and G.S. Engel, "Biexcitons do not form in MoS2 monolayers from optical pumping at 6 K", Ultrafast Phenomena and Nanophotonics XXIV 11278, 1127805

82. S-H Yeh, R. Hoehn, M.A. Allodi, G.S. Engel, and S. Kais, "Elucidation of near-resonance vibronic coherence lifetimes by nonadiabatic electronic-vibrational state character mixing", PNAS 16, 18263-18268 2019.

81. L. Wang,* M.A. Allodi,* and G.S. Engel, "Quantum coherences reveal excited-state dynamics in biophysical systems", Nature Reviews Chemistry, 3, 477–490 2019.

80. S.C. Massey, P.-C. Ting, S.-H. Yeh, P.D. Dahlberg, S.H. Sohail, M.A. Allodi, E.C. Martin, S. Kais, C.N. Hunter, and G.S. Engel, "Orientational Dynamics of Transition Dipoles and Exciton Relaxation in LH2 from Ultrafast Two-Dimensional Anisotropy", JPCL, 10 270–277 2019.

79. Z. Hu, G.S. Engel, and S. Kais, "Double-excitation manifold's effect on exciton transfer dynamics and the efficiency of coherent light harvesting", PCCP 20, 30032-30040 2018.

78. E.M. Janke, N.E. Williams, C. She, D. Zherebetskyy, M. Hudson, L. Wang, D.J. Gosztola, R.D. Schaller, B. Lee, C. Sun, G.S. Engel, D.V. Talapin, "The origin of broad emission spectra in InP quantum dots: contributions from structural and electronic disorder", JACS 140, 15791–15803 2018

77. Z. Hu, G.S. Engel, S. Kais, "Connecting bright and dark states through accidental degeneracy caused by lack of symmetry", J. Chem. Phys. 148, 204307 (2018)

76. J. Otto,* L. Wang,* I. Pochorovski, S.M. Blau, A. Aspuru-Guzik, Z. Bao, G.S. Engel, and M. Chiu, "Disentanglement of Excited-State Dynamics with Implications for FRET Measurements: Two-Dimensional Electronic Spectroscopy of a BODIPY-Functionalized Cavitand", Chemical Science 9, 3694-3703 2018.

75. Z. Hu, G.S. Engel, F. Alharbi, and S. Kais , "Dark states and delocalization: competing effects of quantum coherence on the efficiency of light harvesting systems", J. Chem. Phys. 48, 064304 2018.

74. B.S. Rolczynski, H. Zheng, V.P. Singh, P. Navotnaya, A.R. Ginzburg, J.R. Caram, K. Ashraf, A.T. Gardiner, S.-H. Yeh, S. Kais, R.J. Cogdell, and G.S. Engel, "Correlated Protein Environments Drive Quantum Coherence Lifetimes in Photosynthetic Pigment-Protein Complexes", Chem 4, 138–149 2018.

73. L. Wang, N.P. Brawand, M. Vörös, P.D. Dahlberg, J.P. Otto, N.E. Williams, D.M. Tiede, G. Galli, and G.S. Engel, "Excitations Partition into Two Distinct Populations in Bulk Perovskites" Adv. Opt. Mat. 1700975 2018

72. L. Wang, A. Filatov, and G.S. Engel, "Crystal structure of 4'-Allyl-4,5,6,7,2',7'-hexachlorofluorescein allyl ester solvate", Acta Crystallographica E 74, 83-87 2018

71. M.A. Allodi, J.P. Otto, S.H. Sohail, R.G. Saer, R.E. Wood, B.S. Rolczynski, S.C. Massey, P.-C. Ting, R.E. Blankenship, and G.S. Engel, "Redox Conditions Affect Ultrafast Exciton Transport in Photosynthetic Pigment-Protein Complexes", J. Phys. Chem. Lett. 9, 89-95 2018.

70. P.D. Dahlberg, P.-C. Ting, S.C. Massey, M.A. Allodi, E.C. Martin, C.N. Hunter, and G.S. Engel, "Mapping the ultrafast flow of harvested solar energy in living photosynthetic cells", Nat. Comm. 8, 988 2017.

69. S.H. Sohail,* P.D. Dahlberg,* M.A. Allodi, S.C. Massey, P.-C. Ting, E.C. Martin, C.N. Hunter, and G.S. Engel, "Communication: Broad Manifold of Excitonic States in Light-Harvesting Complex 1 Promotes Efficient Unidirectional Energy Transfer in vivo", J. Chem. Phys 147, 131101 2017.

68. Gregory D. Scholes, Graham R. Fleming, Lin X. Chen, Alán Aspuru-Guzik, Andreas Buchleitner, David F. Coker, Gregory S. Engel, Rienk van Grondelle, Akihito Ishizaki, David M. Jonas, Jeff S. Lundeen, James K. McCusker, Shaul Mukamel, Jennifer P. Ogilvie, Alexandra Olaya-Castro, Mark A. Ratner, Frank C. Spano, K. Birgitta Whaley, Xiaoyang Zhu "Utilizing Coherence to Enhance Function in Chemical and Biophysical Systems", Nature 543, 647–656 2017.

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INVITED TALKS

Mayo Clinic/UChicago Meeting on Quantum Medicine, September 2024
NSF Quantum Showcase, Rayburn House Office Building, April 2024
Spring ACS National Meeting (invited), April 2024
Lane Technical High School, Quantum Discussion, August 2023
University of California, San Diego, April 2023
Gordon Research Conference on Quantum Biology, Galveston, TX, March 2023
White House Quantum Summit, OSTP, December 2022
NSF Grantees Workshop, Keynote Speaker on Quantum Biology, December 2022
Telluride Scientific Research Center, June 2022
National Academic of Sciences Quantum Science for Chemistry, June 2022
Vanderbilt University, February 2022
UChicago Cancer Center Seminar, January 2022
DOE Photosynthesis Meeting, November 2021
UChicago Pritzker School of Molecular Engineering, October 2021
Midwest/Southeast Photosynthesis Meeting, Keynote Lecture, October 2021
AFOSR Molecular Dynamics Meeting, May 2021
Spring ACS National Meeting (invited), April 2021
EU COPAC Meetings, March 2021
Tata Institute for Research/IISC Seminar, March 2021
Coherent Multidimensional Spectroscopy Online Seminar, February 2021
Army Research Office, Biotronics Meeting, July 2019
Univ. of California, Los Angeles, *Bernstein Lecture*, April 2019
Princeton University, March 2019
NSF Distinguished Speaker Series, Biological Sciences Division, Alexandria, VA February 2019
NSF Quantum Biology and Quantum Processes Meeting, Alexandria, VA, November 2018
IDA Vannevar Bush Fellows Research Study Team, November 2018
ACS Regional Meeting, Little Rock, Arkansas, November 2018
Coherent Multidimensional Spectroscopy 2018 (CMDS 2018), Seoul, Korea, June 2018
Grand Challenges in the Chemical Sciences, Israel National Academy of Sciences, June 2018
American Chemical Society National Meeting, New Orleans, LA, March 2018
Argonne National Laboratory, February 2018
University of Buffalo, February 2018
University of Nevada, Reno Seminar, December 2017
American Chemical Society National Meeting, San Francisco, CA, April 2017

American Physical Society March Meeting, New Orleans LA, March 2017
Cambridge University, November 2016
DoD Basic Research Seminar, Washington D.C., October 2016
Colorado State University, Fort Collins CO, September 2016
ACS Fall Meeting, Philadelphia, August 2016
QEERI, Doha Qatar, June 2016
Plenary Speaker, 1st Annual Southwest Ultrafast Conference, Austin, Texas, June 2016
DOE Quantum Coherence Meeting, April 2016
ACS Spring Meeting, San Diego, April 2016
IBS Center for Molecular Spectroscopy and Dynamics, Seoul, Korea, October 2015
Illinois State University, October 2015
Johns Hopkins University, September 2015
ACS Fall Meeting, August 2015
QUEBS 2015, Florence, Italy, July 2015
UC Berkeley, May 2015
Michigan State University, March 2015
Cambridge University, March 2015
Plenary Lecture, Light Harvesting Processes 2015, Banz, Germany (March 2015)
McGill University, February 2015
Georgia Tech, February 2015
University of North Texas, January 2015
ACS Fall Meeting, San Francisco, August 2014
Atomic and Molecular Interactions, Gordon Research Conference July 2014
Stanford Dow Lecture, May 2014
FermiLab National Laboratory, April 2014
Pittsburg Quantum Institute, University of Pittsburgh, March 2014
Ohio State University, March 2014
Phi Lamda Upsilon Lecture, Kansas State Univeristy, March 2014
Caltech Chemical Physics Student-Invited Seminar, February 2014
Northwestern University, January 2014
Columbia University, October 2013
Plenary Lecture, SciX Conference, Innovation Award Lecture, October 2013
Dynamics in Biology, Beijing China, August 2013
QUEBS 2013, Vienna, Austria, July 2013
McElvain Student-Invited Lecture, University of Wisconsin, March 2013
Plenary Lecture, 72nd Okazaki Conference, Institute for Molecular Science, Okazaki, Japan, January 2013
E. Bright Wilson Prize Lecture, Harvard University, December 2012
Rice University, October 2012
Quantum Biology Meeting, University of Surrey, UK September 2012
ACS Fall Meeting, Philadelphia, August 2012
Gordon Conference on Electronic Spectroscopy and Dynamics, July 2012
Plenary Lecture, International Molecular Spectroscopy Conference, Columbus, Ohio, June 2012
Plenary Lecture, Phonons and Fluctuations workshop, Barcelona, Spain, May 2012
Searle Foundation, April 2012
University of Illinois, Chicago, April 2012
ACS Spring Meeting, San Diego, March 2012

Brigham Young University, February 2012
University of Colorado, Boulder, November 2011
Princeton University Chemistry Department, November 2011
The University of Pennsylvania, Chemistry Department, October 2011
ACS Autumn Meeting, Denver, August 2011
QUEBS 2011, Ulm Germany August 2011
Faraday Discussions, "Coherence and Control in Chemistry," Leeds England, July 2011
Photosynthesis Gordon Conference, Davidson College, North Carolina, June 2011
Excited State Processes in Electronic and Bio Nanomaterials, Los Alamos/Santa Fe, June 2011
Theo Murphy Royal Society Meeting, "Quantum-Coherent Energy Transfer," Chicheley, UK, April 2011
University of Southern California Chemistry Department, March 2011
ACS Spring Meeting, Anaheim, March 2011
Faraday Discussions, "Frontiers of Spectroscopy," Basel, Switzerland, March 2011
Washington University of St. Louis, Chemistry Department and EFRC, March 2011
Northwestern University, Chemistry Department, February 2011
Progress in Quantum Electronics, Snowbird, Utah, January 2011
DARPA QUBE Program Meeting, October 2010
Keynote Speaker, Workshop on Quantum Biology, Capri Italy, October 2010
Solvay Conference on Quantum Biology, Brussels Belgium, October 2010
MIT, Chemistry Department, September 2010
University of Michigan, September 2010
FermiLab National Laboratory, August 2010
5th International Conference on Coherent Multidimensional Spectroscopy, August 2010
Gordon Conference, "Electronic Processes in Organic Materials," July 2010
AFOSR Molecular Dynamics Meeting, May 2010
Center for NanoScale Materials, Argonne National Laboratory, May 2010
University of Oregon, Chemistry Department, April 2010
MIT Excitonics Center, November 2009
Federation of Analytical Chemistry and Spectroscopy Societies, October 2009.
Workshop on Quantum Effects in Biological Systems, Lisbon Portugal, July 2009
Argonne National Laboratory, April 2009
University of Missouri, Chemistry Department, April 2009
Purdue University, Physics Department, February 2009
DARPA Quantum Effects in Biology Meeting, Arlington, VA, November 2008
Midwestern Photosynthesis Conference, Turkey Run, IN, October 2008
DePauw University, Chemistry Department, Greencastle, IN, October 2008
American Chemistry Society Meeting, New Orleans, LA, April 2008
University of Illinois, Urbana Champaign, Chemistry Department, February 2008
Princeton University, Physics Department, February 2008
Biophysical Society of America, Baltimore, MD, March 2007
Western Photosynthesis Conference, Asilomar, CA, January 2007

POPULAR PRESS COVERAGE HIGHLIGHTS

Forbes Magazine, Quantum Leap Challenge Institute, September 2021
NPR, Quantum Leap Challenge Institute, September 2021
PhysOrg, "Bacteria know how to exploit quantum mechanics, study finds" March 2021

C&E News, “An Optical Analog to MRI”, April 2017
Science Daily, “Technique Unlocks Design Principles of Quantum Biology,” April 2013
Wired Magazine, “More Evidence Found for Quantum Physics in Photosynthesis” December 2011
Wired Magazine, “Leafy Green Coherence: Quantum Physics Fuels Photosynthesis” July 2010
Quoted in Wired Magazine, “Everywhere in a Flash: The Quantum Physics of Photosynthesis” February 2010
Quoted in Scientific American, “Shining a Light on Plants' Quantum Secret to Boost Photosynthesis” February 2010
Technology Review, “Best of the Arxiv 2/6/2010” February 2010
“Quantum Secrets of Photosynthesis” Two part television series aired on LA Area Cable, Dec 2008
Scientific American’s Top 50 Leaders in Research (SciAm 50), February 2008