

Seogjoo J. Jang, Ph.D.

Current Position: Professor, Department of Chemistry and Biochemistry
Queens College, City University of New York (CUNY)
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Education

Ph.D., Theoretical Chemistry (July 1995 - Dec. 1999)	University of Pennsylvania
Graduate Study in Chemistry and Physics (Sep. 1994 - June 1995)	Georgia Tech.
MS, Theoretical Chemistry (Mar. 1989 - Aug. 1993)	Seoul National University
(Leave of Absence due to military service during Mar. 1990 - Mar. 1992)	
BS, Chemistry (Mar. 1985 - Feb. 1989)	Seoul National University

Employment and Experience

Professor of Chemistry (Sep. 2012 - Present)	Queens College, CUNY
Chair, Department of Chemistry and Biochemistry (July 2018 - June 2021)	Queens College, CUNY
Associate Professor of Chemistry (Jan. 2010 - Aug. 2012)	Queens College, CUNY
Assistant Professor of Chemistry (Sep. 2005 - Dec. 2009)	Queens College, CUNY
Goldhaber Distinguished Fellow (Jan. 2003 - Aug. 2005)	Brookhaven National Laboratory
Postdoctoral Associate (Nov. 1999 - Dec. 2002)	Massachusetts Institute of Technology

Other current appointments

Korea Institute for Advanced Study (KIAS) Scholar (Jan. 2022 - Present)	Seoul, Korea
Faculty, Initiative for the Theoretical Sciences (Sep. 2011 - Present)	Graduate Center, CUNY
Doctoral Faculty of Physics (Jan. 2009 - Present)	Graduate Center, CUNY
Doctoral Faculty of Chemistry (Oct. 2005 - Present)	Graduate Center, CUNY

Other past appointments and experience

Visiting Professor, KAIST (Aug. 2022 - Feb. 2023)	Daejeon, Korea
Visiting Senior Research Scientist (Sep. 2012 - May 2014)	Columbia University
Visiting Research Scientist (June 2012 - Aug. 2012)	University of California, Berkeley
Guest Scientist (Sep. 2005 - Aug. 2014)	Brookhaven National Laboratory
Korean Military Service (Oct. 1990 - Mar. 1992)	Seoul, South Korea

Awards

Outstanding Community Service Award (2017)	KSEA
Camille Dreyfus Teacher-Scholar Award (2010 - 2015)	Dreyfus Foundation
Salute to Scholars (2010, 2011, 2014, 2016)	City University of New York
Faculty Early Career Development Award (2009 - 2014)	National Science Foundation
Goldhaber Distinguished Fellowship (2003 - 2005)	Brookhaven National Lab.
Chairman's Award for Academic Excellence (1996)	University of Pennsylvania

Research Expertise available for consulting: Solar Energy Conversion, Computational Chemistry, Energy/Charge Transfer Processes, Spectroscopy

Current Research Support

3. **Seogjoo J. Jang**, "Theories and computational methods for accurate and efficient description of the dynamics of excited states and molecular excitons in complex environments," Department of Energy; Sep. 2025 - Aug. 2028
2. **Seogjoo J. Jang**, "Development of theories and computational methods for controlled quantum dynamics and quantum thermodynamics of molecular systems in complex environments," PSC-CUNY Grant; July 2025 - June 2026
1. **Seogjoo J. Jang**, "Computational modeling of the energy gap law behavior of non-radiative decay rates from electronic excited states and new theoretical development," PSC-CUNY Grant; July 2024 - Dec. 2025

Past Research Support

19. **Seogjoo J. Jang**, "Integrative computational investigation of the spectroscopy, dynamics, and controlling of molecular excitons in complex environments," Department of Energy; Sep. 2020 - May 2025
18. **Seogjoo J. Jang**, "Quantum dynamics methods for fluctuating systems in quantum environments: Development and Application," National Science Foundation; July 2019 - June 2023
17. **Seogjoo J. Jang**, "Theoretical investigation of the distance dependence of resonance energy transfer in the presence of quantum coherence and nonequilibrium effects," PSC-CUNY Grant; July 2019 - Dec. 2023
16. **Seogjoo Jang**, "Molecular level characterization of quantum design principles for efficient and robust exciton and charge migration," Department of Energy, Office of Basic Energy Sciences, Program of Computational and Theoretical Chemistry (PCTC); Jan. 2016 - Dec. 2019
15. **Seogjoo Jang**, "Development of next generation quantum master equation and generalized master equation approaches," National Science Foundation; May 2014 - Oct. 2017
14. **Seogjoo Jang**, "Large scale molecular level and quantum simulation of light harvesting complexes in photosynthetic purple bacteria," PSC-CUNY Grant; July 2016 - June 2017
13. **Seogjoo Jang**, "Elucidating positive quantum effects for efficient energy and charge transfer dynamics in soft solar energy conversion systems," Department of Energy, Office of Basic Energy Sciences, Program of Computational and Theoretical Chemistry Research (PCTC); Jan. 2013 - Dec. 2015
12. **Seogjoo Jang**, "Theory development and computational modeling of exciton and electron/hole migration in soft disordered environments," Camille Dreyfus Teacher-Scholar Award; June 2010 - May 2015
11. **Seogjoo Jang**, "Kinetic Monte Carlo simulation of electron-hole pair dynamics in polymeric bulk heterojunction device," PSC-CUNY grant; July 2010 - Dec. 2011

10. **Seogjoo Jang**, "Coarse-grained computational modeling of conjugated polymers at nanometer length scale," User Proposal for linux cluster in the Center for Functional Nanomaterials, Brookhaven National Laboratory; Sep. 2009 -Dec. 2010
9. **Seogjoo Jang**, "Computational modeling and theory development of charge flow dynamics in photosynthetic units and conjugated polymer systems," Department of Energy, Office of Basic Energy Sciences, Program of Computational and Theoretical Chemistry (PCTC); Sep. 2009 - Dec. 2012
8. **Seogjoo Jang**, "Theoretical modeling of the pump-probe anisotropy of coherent resonance energy transfer dynamics," PSC-CUNY grant; July 2009 - Dec. 2010
7. **Seogjoo Jang**, "Synergistic theory development and computational modeling of the energy flow dynamics in soft optoelectronic molecules," National Science Foundation, CAREER award; May 2009 - Apr. 2014
6. **Seogjoo Jang**, "Coarse-grained computational modeling of conjugated polymers," Research Enhancement Grant, Queens College; July 2009 - Aug. 2010
5. **Seogjoo Jang**, "Theoretical investigation on the microscopic basis of the two-state model of the excess electron in saturated hydrocarbon liquids based on path integral simulation," American Chemical Society Petroleum Research Foundation, Type G grant; July 2007 - Aug. 2010
4. **Seogjoo Jang**, "Theoretical development and application of path integral centroid methods for quantum dynamics simulation of condensed phase systems," PSC-CUNY grant; July 2008 - June 2009
3. **Seogjoo Jang**, "Feynman path integral simulation of an excess electron in hydrocarbon liquids," Research Enhancement Funding, Queens College; Nov. 2007 - May 2008
2. Zhonghua Yu and **Seogjoo Jang**, "Single Molecule Spectroscopy of Conjugated Organic Oligomers: A Joint Experimental and Theoretical Study," CUNY Collaborative Research Grant; Sep. 2006 - Aug. 2008
1. **Seogjoo Jang**, "Quantum dynamical modeling and computation of the charge transport through single DNA duplexes," PSC-CUNY grant; July 2006 - Dec. 2007

Recent Invited Talks and Seminars (2009 - Present)

99. Telluride Workshop on "Exciton/Photon interactions for quantum systems" (Sep., 2025)
98. KIAS Electronic structure calculation conference, Seoul (July, 2025)
97. Sungkyunkwan University, Suwon, Korea (June, 2025)
96. Princeton Center for Theoretical Science Workshop on "Nonadiabatic dynamics, electron-phonon interactions, and spin-phonon couplings" (April-May, 2025)
95. University of Texas at Austin (April, 2025)
94. Texas A&M (April, 2025)

93. University of Tokyo (January, 2025)
92. 11th Triennial Congress of the International Society of Theoretical Chemical Physics, Qingdao, China (October 2024)
91. University of Illinois Urbana-Champaign (October, 2024)
90. Kangwon National University (August, 2024)
89. Telluride Workshop on “Spatio-temporal dynamics of excitons: Bridging the gap between quantum mechanics and applications,” Telluride, CO (June 2024)
88. Boston University (April, 2024)
87. University of Toronto (April, 2024)
86. City College, CUNY, New York (Apr. 2024)
85. American Chemical Society National Meeting, New Orleans (March, 2024)
84. Workshop on “Non-Markovian Quantum Dynamics,” Flatiron Institute, New York (Sep. 2023)
83. Workshop on “Quantum Dynamics and Spectroscopy of Functional Molecular Materials and Biological Photosystems,” Les Houches, France (Sep. 2023)
82. International Conference on Biological Physics, Seoul (August, 2023)
81. International Workshop on New Advances in Theoretical and Computational Molecular Sciences for Complex and Quantum Processes, Seoul (June, 2023)
80. Northwestern University, Evanston (May, 2023)
79. Duke University, Durham (April, 2023)
78. East Regional Photosynthesis Conference, Woods Hole (April, 2023)
77. American Chemical Society National Meeting, Indianapolis (March, 2023)
76. University of Seoul, Seoul, Korea (March, 2023)
75. Yonsei University, Seoul, Korea (March, 2023)
74. Korea University, Seoul, Korea (March, 2023)
73. Academia Sinica and Taiwan National University, Taiwan (March, 2023)
72. KIAS Workshop on Quantum Information and Thermodynamics, Busan, Korea (December, 2022)
71. Chungbuk National University, Cheongju, Korea (November 2022)
70. Seoul National University, Seoul, Korea (November 2022)
69. Korean Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (November 2022)
68. Telluride Workshop on “Spatio-temporal dynamics of excitons: Bridging the gap between quantum mechanics and applications,” Telluride, CO (September 2022)

67. Kyungpook National University, Daegu, Korea (July 2022)
66. Chung-Ang University, Seoul, Korea (July 2022)
65. American Chemical Society mid-Atlantic Regional Meeting, Ewing, NJ (June 2022)
64. American Chemical Society National Meeting, San Diego (March 2022)
63. Pacificchem 2021 Congress, Virtual (Dec. 2021)
62. Virtual Telluride Workshop on “Quantum Frontiers in Molecular Science” (July 2020)
61. Chinese Academy of Sciences and Peking University, Beijing, China (November 2019)
60. Nanjing University of Post and Telecommunication, Nanjing, China (November 2019)
59. University of Rochester, Rochester, NY (November 2019)
58. American Chemical Society National Meeting, San Diego, CA (August 2019)
57. 10th Triennial Congress of the International Society of Theoretical Chemical Physics, Tromsø, Norway (July 2019)
56. Telluride Workshop on “Quantum Dynamics and Spectroscopy in Condensed-Phase Materials and Bio-Systems,” Telluride, CO (June 2019)
55. DOE Research Meeting of the Computational and Theoretical Chemistry Program, Gaithersburg, MD (May 2019)
54. American Chemical Society National Meeting, Boston (Aug. 2018)
53. US-Korea Conference 2018, Queens, NY (Aug. 2018)
52. Chung-Ang University, Seoul, Korea (July 2018)
51. Korean Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (July 2018)
50. Korea University, Seoul, Korea (July 2018)
49. Korean Institute for Advanced Study (KIAS), Seoul, Korea (July 2018)
48. Advanced Science Research Center, CUNY, New York (April 2018)
47. Mini-Workshop on Nonadiabatic Dynamics and Conical Intersections, New York University, New York (Nov. 2017)
46. US-Korea Conference 2017, Washington DC (Aug. 2017)
45. Workshop on “Quantum Dynamics and Spectroscopy of Functional Molecular Materials and Biological Photosystems,” Les Houches, France (May 2017)
44. DOE Research Meeting of the Computational and Theoretical Chemistry Program, Gaithersburg, MD (May 2017)
43. Korean Institute for Advanced Study (KIAS) Workshop on “Quantum Information and Thermodynamics,” Jeju, Korea (Nov. 2016)
42. Seoul National University, Seoul (Nov. 2016)

41. American Chemical Society National Meeting, Philadelphia (Aug. 2016)
40. Telluride Workshop on “Molecular Recognition and the Chemical Senses,” Telluride, CO (July 2016)
39. University of California at San Diego (May, 2016)
38. University of Toronto (April, 2016)
37. American Chemical Society National Meeting, San Diego (March, 2016)
36. Stony Brook University, Laufer Center (January, 2016)
35. Seoul National University, Seoul, Korea (August 2015)
34. Korea Institute for Advanced Study (KIAS), Seoul, Korea (August 2015)
33. Postech Symposium on “Chemistry and Light,” Pohang, Korea (August 2015)
32. Penn Computational and Theoretical Chemistry Conference, Philadelphia, PA (July 2015)
31. Telluride Workshop on “Quantum Effects in Condensed Phase Systems,” Telluride, CO (July 2015)
30. Telluride Workshop on “Quantum Dynamics and Spectroscopy in Condensed-Phase Materials and Bio-Systems,” Telluride, CO (June 2015)
29. “Recent Advances in Quantum Dynamics and Thermodynamics of Complex Systems,” the 15th ICQC Satellite Meeting, Beijing, China (June, 2015)
28. DOE Research Meeting of the Computational and Theoretical Chemistry Program, Annapolis, MD (Apr. 2015)
27. Rutgers University, Newark, NJ (Apr. 2015)
26. University of Chicago, Chicago, IL (Nov. 2014)
25. Carnegie Mellon University, Pittsburgh, PA (Apr. 2014)
24. Princeton University, Princeton, NJ (Oct. 2013)
23. University of Pennsylvania, Philadelphia, PA (Sep. 2013)
22. US-Korea Conference 2013, East Rutherford, NJ (Aug. 2013)
21. Telluride Workshop on “Nonequilibrium Phenomena, Nonadiabatic Dynamics, and Spectroscopy,” Telluride, CO (July 2013)
20. Telluride Workshop on “Quantum Dynamics and Spectroscopy in Condensed-Phase Materials and Bio-Systems,” Telluride, CO (July 2013)
19. Brookhaven National Lab., Center for Functional Nanomaterials User’s Meeting, Upton (May, 2013)
18. New York Theoretical and Computational Chemistry Conference, New York (Jan. 2013)
17. Arizona State University, Energy Research Frontier Center, Tempe (Oct., 2012)

16. American Chemical Society National Meeting, Philadelphia (Aug., 2012)
15. New York University, New York (May, 2012)
14. Hunter College, CUNY, New York (Feb. 2012)
13. City College, CUNY, New York (Nov. 2011)
12. College of Staten Island, CUNY, New York (Nov. 2011)
11. Symposium on “Quantum Biology - Applications of Physical and Chemical Methods in Biological Systems,” Boston, MA (Oct. 2011)
10. DOE Research Meeting of the Condensed Phase and Interfacial Molecular Science Program, Baltimore, MD (June 2011)
9. Brookhaven National Laboratory (May 2011)
8. University of Michigan (April 2011)
7. City College (Chemical Engineering) , CUNY (April 2011)
6. York College, CUNY (Mar. 2011)
5. Workshop on “Quantum Effects in Biological Systems,” Cambridge, MA (June 2010)
4. Canadian Chemical Society Conference on “Coherence and Decoherence in Molecular Systems,” Toronto, Canada (May 2010)
3. CECAM Workshop on “Theoretical, Computational, and Experimental Challenges to Exploring Coherent Quantum Dynamics in Complex Many-Body Systems,” Dublin, Ireland (May 2010)
2. Soft Materials Symposium: “The Future of Solar Technologies” (Moderator), New York Academy of Sciences (Jan. 2010)
1. Conference on Quantum Information and Quantum Control, Fields Institute, Toronto (Aug. 2009)

Mentoring

Postdoctoral Researchers

Dr. Pablo Ramos, Queens College (Sep. 2020 - Aug. 2023)
Dr. Ning Chen, Queens College (Feb. 2020 - June 2021)
Dr. Eva Rivera, Queens College (June 2013 - May 2017)
Dr. Daniel Montemayor, Queens College (June 2013 - May 2017)
Dr. Hiroko Ajiki, Queens College (part time) (July 2013 - Dec. 2015)
Dr. Praveen Kumar, Queens College (Feb. 2010 - Sep. 2012)
Dr. Lei Yang, Queens College (Nov. 2008 - June 2012)

Ph.D. Students

Taner Ture, PhD, Chemistry, Graduate Center, CUNY (June 2016 - May 2024)
Ning Chen, PhD, Chemistry, Graduate Center, CUNY (June 2014 - Feb. 2020)
Murali Devi, PhD, Physics, Graduate Center, CUNY (Apr. 2008 - May 2016)

Marta Kowalczyk, PhD, Chemistry, Graduate Center, CUNY (Jan. 2007 - March 2013)

Master's Students

Ryan Pangilinan, MA, Physics, Graduate Center, CUNY (July 2019 - Dec. 2021)

Xun Huang, MA, Chemistry, Graduate Center, CUNY (July 2009 - June 2012)

Andres Montoya Castillo, MA, Physics, Graduate Center, CUNY (June 2009 - May 2011)

Undergraduate Students

Ester Aziz, BA, Chemistry, Queens College (June 2014 - Dec. 2015)

Eric Steimez, BA, Computer Science, Queens College (Jan. 2014 - May 2016)

Daniel Sangobawno, BA, Chemistry, Queensborough Community College, CUNY (June 2009 - Aug. 2009)

Alexis Estrada, BA, Chemistry, Queens College, CUNY (June 2009 - May 2010)

Jin Bakalis, BA, Chemistry, Queens College, CUNY (June 2009 - May 2010)

Andres Montoya Castillo, BA, Chemistry, Honors College, CUNY (June 2007 - May 2009)

Michael Kirschenbaum, BA, Chemistry, Queens College (Jan. 2006 - Dec. 2007)

High School Students

Michael Kaplan, Bronx High School (Jan. 2007 - Jan. 2009) - Siemens Competition Semifinalist, Intel Talent Search Competition Semifinalist, New York City Science and Engineering Fair Finalist, and Intel International Science and Engineering Fair 4th place winner

Teaching

Introductory Quantum Chemistry (Fall, 2025)	Graduate Center, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2025)	Queens College, CUNY
Introductory Quantum Chemistry (Fall, 2024)	Graduate Center, CUNY
Coordination of General Chemistry 1 Laboratory (Fall, 2024)	Queens College, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2024)	Queens College, CUNY
Chemical Thermodynamics and Kinetics (Fall, 2023)	Queens College, CUNY
Coordination of General Chemistry 1 Laboratory (Fall, 2023)	Queens College, CUNY
Quantum Chemistry (Fall, 2022)	KAIST
Quantum Chemistry and Spectroscopy (Spring, 2022)	Queens College, CUNY
Introductory Quantum Chemistry (Fall, 2021)	Graduate Center, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2021)	Queens College, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2020)	Queens College, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2018)	Queens College, CUNY
Chemical Thermodynamics and Kinetics (Fall, 2017)	Queens College, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2017)	Queens College, CUNY
Introductory Quantum Chemistry (Fall, 2016)	Graduate Center, CUNY
Molecular Quantum Mechanics (Spring, 2016)	Queens College, CUNY
Introductory Quantum Chemistry (Fall, 2015)	Graduate Center, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2015)	Queens College, CUNY
Chemical Thermodynamics and Kinetics (Fall, 2014)	Queens College, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2014)	Queens College, CUNY
Chemical Thermodynamics and Kinetics (Fall, 2013)	Queens College, CUNY

Quantum Chemistry and Spectroscopy (Spring, 2012)	Queens College, CUNY
Advanced Seminar (Fall, 2011)	Graduate Center, CUNY
Quantum Mechanics for Solar Energy Conversion (Fall, 2011)	Graduate Center, CUNY
Quantum Chemistry and Spectroscopy (Spring, 2011)	Queens College, CUNY
Introduction to Spectroscopy (Fall, 2010)	Graduate Center, CUNY
Chemical Thermodynamics and Kinetics (Fall, 2009)	Queens College, CUNY
Physical Chemistry II (Spring, 2009)	Queens College, CUNY
Seminar (Fall, 2008)	Queens College, CUNY
Physical Chemistry I (Fall, 2008)	Queens College, CUNY
Lectures on Spectroscopy (Spring, 2008)	Graduate Center, CUNY
Introductory Quantum Chemistry (Fall, 2007)	Graduate Center, CUNY
Seminar (Spring, 2007)	Queens College, CUNY
Physical Chemistry II (Spring, 2007)	Queens College, CUNY
Advanced Seminar (Spring, 2006)	Graduate Center, CUNY
Introduction to Spectroscopy (Spring, 2006)	Graduate Center, CUNY
Physical Chemistry II (Spring, 2006)	Queens College, CUNY

Synergistic Activity (Sep. 2005 - Present)

College Activity

- Physical Chemistry PhD Program Sub-discipline Chair, Graduate Center, CUNY (Sep. 2023 - Present)
- Dean Search Committee, Queens College, CUNY (Dec. 2018 - May, 2019)
- College Website Advisory Committee, Queens College, CUNY (Nov. 2018 - Present)
- Faculty Search Committee, Queens College, CUNY (Nov. 2017 - Apr. 2018)
- Faculty Search Committee, City College, CUNY (Nov. 2013 - Feb. 2014)
- Doctoral Program Restructuring Super Committee, CUNY (Sep. 2013 - Feb. 2014)
- Doctoral Program Restructuring Committee, Queens College, CUNY (Nov. 2012 - Jan. 2013)
- Tech Fee Committee, Queens College, CUNY (Nov. 2009 - Nov. 2011)
- Deputy Chair, Department of Chemistry and Biochemistry, Queens College, CUNY (July 2009 - June 2015)
- Personnel and Budget Committee, Department of Chemistry and Biochemistry, Queens College, CUNY (May 2009 - Present)
- Executive Committee, Chemistry Graduate Program, City University of New York (May 2009 - Present)
- Graduate Admission Committee (Mar. 2006 - Oct. 2008), Queens College, CUNY
- Faculty Hiring Committee (2005, 2006), Queens College, CUNY
- Academic Senate, Queens College, CUNY (2007 - 2008, 2017 - 2018)

Academic Activity

- Co-organization of International Workshop on “New Advances in Theoretical and Computational Molecular Sciences for Complex and Quantum Processes,” Seoul (July 2024)
- Co-organization of Telluride Workshop on “Spatio-temporal dynamics of excitons: Bridging the gap between quantum mechanics and applications,” Telluride, CO (June 2024)
- Co-organization of International Workshop on “New Advances in Theoretical and Computational Molecular Sciences for Complex and Quantum Processes,” Seoul (June 2023)
- Co-organization of Telluride Workshop on “Spatio-temporal dynamics of excitons: Bridging the gap between quantum mechanics and applications,” Telluride, CO (Sep. 2022)
- Co-organization of Telluride Workshop (virtual) on “Spatio-temporal dynamics of excitons: Bridging the gap between quantum mechanics and applications,” Telluride, CO (July 2021)
- Co-editor, Journal of Chemical Physics Special Issue on “Excitons: Energetics and Spatio-temporal dynamics” (April 2020)
- Co-organization of Symposium on “Characterization, Detection & Application of Excitons in Chemistry” at the American Chemical Society National Meeting, Boston (August, 2018)
- Organization of Workshop on Theoretical and Computational Chemistry, Initiative for the Theoretical Sciences, Graduate Center, CUNY (May 2014-Present)
- Organization of Annual “New York Theoretical and Computational Chemistry Conference,” Graduate Center, CUNY (Jan. 2010 - 2013, May 2015)
- Organization of a CUNY theory meeting “Association of Theoretical and Computational Chemists at CUNY (ATaCCC)” (2006-2008, 2010 -Present)
- Organization of “Workshop on Computation, Simulation, and Modeling of molecular processes,” Graduate Center, CUNY (2007- 2008)
- Soft Materials Steering Committee, the New York Academy of Sciences (2006 - 2010)
- Chair, “Computers in Chemistry” Topical Group, New York Section of the American Chemical Society (Dec. 2008 - Present)
- Co-Chair, Computational Chemistry Program, 2008 mid-Atlantic regional meeting of the American Chemical Society & Organization of “Computational chemistry for the health of humanity and the planet,” 2008 mid-Atlantic regional meeting of the American Chemical Society, Queensborough Community College, CUNY (May 2008)

Activity for Korean-Scientists and Engineers Association

- Project Director, KSEA 46th Administration (July 2017-June 2018)
- Program Chair of KSEA Scientists’ and Engineers’ Early Career Development Workshop, Vienna, VA (Dec. 2017)

- Project Director, KSEA 45th Administration (July 2016-June 2017)
- Project Director, KSEA 42nd Administration (July 2013 - June 2014)
- Program Chair of KSEA Professional Development Workshop (ProDeW), Chicago, IL (March 2014)
- Technical Group B (Chemistry) Councilor, KSEA (July 2011 - June 2014)
- Hosting KSEA NY Metro Chapter's Math and Science Olympiad (KMSO) at Queens College (2007 - 2016, Fall)
- President, New York Metro Chapter of KSEA (July 2010 - June 2011)
- Senior Vice President, New York Metro Chapter of KSEA (July 2009 - June 2010)
- Vice President, New York Metro Chapter of KSEA (July 2007 - June 2009)

Review Activity for Professional Journals

- Journal of Chemical Theory and Computation
- The Journal of Chemical Physics
- Physical Review Letters, A, B, and E
- The Journal of American Chemical Society
- The Journal of Physical Chemistry Letters, A, B, & C
- Chemical Physics
- Soft Matter, Royal Society
- Philosophical Transactions, Royal Society
- Department of Energy Proposals
- National Science Foundation proposals
- CUNY Collaborative grant proposals
- PSC-CUNY Proposals
- Physical Chemistry textbook by Atkins and de Paula, 9th Edition, Freeman and Company
- Physical Chemistry Chemical Physics, a Journal of Royal Society of Chemistry
- New Journal of Physics
- Nature Communications
- Nature Chemistry
- ACS Central Science

- Chem
- RSC Chemical Science
- PRX Quantum
- Advanced Quantum Technologies

Published Books

2. **Seogjoo J. Jang**; “Quantum Mechanics for Chemistry,” (DOI: <https://doi.org/10.1007/978-3-031-30218-3>; ISBN: 978-3-031-30217-6, 978-3-031-30220-6, 978-3-031-30218-3) (Springer Nature, 2023)
1. **Seogjoo J. Jang**; “Dynamics of Molecular Excitons,” Book in *Nanophotonics Series* (ISBN: 9780081023358) (Elsevier, 2020)

Published Journal Articles and Book Chapters

80. Taner M. Ture, Changbong Hyeon, and **Seogjoo J. Jang**; “Application of Magnus expansion for the quantum dynamics of Λ -systems under periodic driving and assessment of the rotating wave approximation,” *Journal of Chemical Physics*, Submitted (2025)
78. Kwang Hyun Cho, **Seogjoo J. Jang**, and Young Min Rhee; “Hidden effects of anharmonic bath on the excitation energy transfer in the light harvesting 2 complex of purple bacteria,” *Journal of Physical Chemistry Letters* **16**, 10473-10482 (2025)
78. **Seogjoo J. Jang** and Young Min Rhee; “Fermi’s golden rule rate expression for transitions due to nonadiabatic derivative couplings in the adiabatic basis,” *Journal of Chemical Theory and Computation* **21**, 1850-1864 (2025)
77. J. D. Schultz, J. L. Yuly, E. A. Arsenault, K. Parker, S. N. Chowdhury, R. Dani, S. Kundu, H. Nuomin, Z. Zhang, J. Valdiviezo, P. Zhang, K. Orcutt, **S. J. Jang**, G. R. Fleming, N. Makri, J. P. Ogilvie, M. J. Therien, M. R. Wasielewski, and D. N. Beratan, “Coherence in chemistry: foundations and frontiers,” *Chemical Reviews* **124**, 11641- 11766 (2024)
76. Won Kyu Kim, Yoonji Lee, **Seogjoo J. Jang**, and Changbong Hyeon, ; “Kinetic model for the desensitization of G protein-coupled receptor,” *Journal of Physical Chemistry Letters* **15**, 6137-6145 (2024)
75. Kwang Hyun Cho, **Seogjoo J. Jang**, and Young Min Rhee; “Dynamic embedding of effective harmonic normal mode vibrations in all-atomistic energy gap fluctuations: Case study of light harvesting 2 complex,” *Journal of Chemical Physics* **160**, 184104 (2024)
74. Taner M. Ture and **Seogjoo J. Jang**; “Simple and general unitarity conserving numerical real-time propagators of the time-dependent Schrödinger equation based on Magnus expansion,” *Journal of Physical Chemistry A* **128**, 2871 - 2882 (2024)
73. Pablo Ramos, Hannah Friedman, Barry Y. Li, Cesar Garcia, Ellen Sletten, and **Seogjoo J. Jang**; “Nonadiabatic derivative couplings through multiple Franck-Condon modes dictate the energy gap law for near and short-wave infrared dye molecules,” *Journal of Physical Chemistry Letters* **15**, 1802 - 1810 (2024)

72. Won Kyu Kim, Kiri Choi, Changbong Hyeon, and **Seogjoo J. Jang**; "General Chemical Reaction Network Theory for GPCR-based Olfactory Sensing: Elucidation of Odorant Mixture Effects and Agonist–Synergist Threshold," *Journal of Physical Chemistry Letters* **14**, 8412 - 8420 (2023)
71. **Seogjoo J. Jang** and Young Min Rhee; "Modified Fermi's golden rule rate expressions," *Journal of Chemical Physics* **159**, 014101(2023)
70. Davinder Singh, **Seogjoo J. Jang**, and Changbong Hyeon; "Fundamental trade-off between the speed of light and the Fano factor of photon current in three-level lambda systems ," *Journal of Physics A: Mathematical and Theoretical* **56**, 015001 (2023)
69. **Seogjoo J. Jang**; "Partially polaron-transformed quantum master equation for exciton and charge transport dynamics," *Journal of Chemical Physics* **157**, 104107 (2022)
68. **Seogjoo J. Jang**, Irene Burghardt, Chao-Ping Hsu, and Christopher J. Bardeen, "Excitons: Energetics and spatiotemporal dynamics," *Journal of Chemical Physics* **155**, 200401 (2021)
67. **Seogjoo J. Jang**; "A simple generalization of the energy gap law for nonradiative processes," *Journal of Chemical Physics* **155**, 164106 (2021)
66. Andrew M Levine, Guiying He, Guanhong Bu, Pablo Ramos, Fanglue Wu, Aisha Soliman, Jacqueline Serrano, Dorian Pietraru, Christopher Chan, James D Batteas, Marta Kowalczyk, **Seogjoo J. Jang**, Brent L Nannenga, Matthew Y Sfeir, Esther H R. Tsai, and Adam B Braunschweig; "Efficient Free Triplet Generation Follows Singlet Fission in Diketopyrrolopyrrole Polymorphs with Goldilocks Coupling," *Journal of Physical Chemistry C* **125**, 12207 - 12213 (2021)
65. Kara Ng, Megan Webster, William P Carbery, Nikunj Kumar Visaveliya, Pooja Gaikwad, **Seogjoo J. Jang**, Ilona Kretschmar, and Dorte M Eisele; "Frenkel excitons in heat-stressed supramolecular nanocomposites enabled by tunable cage-like scaffolding," *Nature Chemistry* **12**, 1157 - 1164 (2020)
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