SEYHAN SALMAN, Ph.D.
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Work Experience

- *Assistant Professor of Chemistry*, Clark Atlanta University, GA, USA. (2019 – current).
- *Adjunct Instructor of Chemistry*, Gwinnett Technical College, GA, USA (2017 – 2019).
- *Assistant Professor*, Department of Genetics and Bioengineering, Faculty of Engineering and Natural Sciences, Istanbul Bilgi University, Istanbul, Turkey (2011 – 2016).
- *Department Chair*, Genetics and Bioengineering, Istanbul Bilgi University, Turkey (2013 – 2016).
- *Postdoctoral Fellow*, Institute of Molecular Sciences (ISM), University of Bordeaux, France (2009 – 2010).
- *Graduate Teaching and Research Assistant*, School of Chemistry and Biochemistry & Center for Organic Photonics and Electronics, Georgia Institute of Technology, Atlanta, GA, USA (2004 – 2009).
- *Graduate Teaching and Research Assistant*, Bosphorus University, Istanbul, Turkey (2002 – 2004).

Education

Georgia Institute of Technology, School of Chemistry and Biochemistry
Ph.D., Chemistry, 2009
Dissertation: Theoretical Characterization of the Charge-Transport and Electroluminescence Properties of Pi-Conjugated Organic Materials
Advisor: Dr. Jean-Luc Brédas

Bosphorus University, Institute of Science
M.S., Chemistry, 2004
Thesis: Modeling the Reactivity of Nonphosphorus and Phosphorus-Containing Acrylates
Advisor: Dr. Viktorya Aviyente

Bosphorus University, Faculty of Arts and Sciences
B.S., Chemistry (*with Honors*), 2002

Publications in peer-reviewed journals

1. M. Cooper, X. Zhang, Y. Zhang, A. Ashokan, C. Fuentes-Hernandez, S. Salman, B. Kippelen, S. Barlow, S. Marder, "Thermally Activated Delayed Fluorescence in 2-Methyl-5-(Penta(9-carbazolyl)phenyl)-3,4,5-Oxadizole Derivatives" submitted to The Journal of Physical Chemistry.
2. Advancing Organic Semiconductors through Computational Research, Scientia 2022. https://doi.org/10.33548/SCIENTIA800
3. **S. Salman**, X. Sallenave, A. Bucinkas, D. Volyniuk, O. Bezvikonnyi, V. Andruleviciene, J. V. Grazulevicius, G. Sini, "Effect of methoxy-substitutions on the hole transport properties of carbazole-based compounds: pros and cons" J. Mater. Chem. C, 9, 9941-9951, 2021.
4. X. Sallenave, A. Bucinskas, **S. Salman**, D. Volyniuk, O. Bezvikonnyi, V. Mimaite, J. Grazulevicius, G. Sini, "Sensitivity of Redox and Optical Properties of Electroactive Carbazole Derivatives to the Molecular Architecture and Methoxy-Substitutions" J. Phys. Chem. C, 122 (18), 10138−10152, 2018.
5. H. T. Turan, B. Kahraman, O. Kucur, **S. Salman** and V. Aviyente "Design of Donor-Acceptor Copolymers for Organic Photovoltaic Materials: A Computational Study", Phys. Chem. Chem. Phys., 20, 3581-3591, 2018.
6. B. Camli, E. Kusakci, B. Lafci, **S. Salman**, H. Torun and A. D. Yalcinkaya "Cost-Effective, Microstrip Antenna Driven Ring Resonator Microwave Biosensor for Biospecific Detection of Glucose" Journal of Selected Topics in Quantum Electronics, 23(2), 1-6, 2017.

7. B. Camli, E. Kusakci, B. Lafci, **S. Salman**, H. Torun, A. Yalcinkaya, "A Microwave Ring Resonator Based Glucose Sensor" Procedia Engineering 168, 465–468, 2016.
8. T. G. Erbay, V. Aviyente, **S. Salman*** "How substitution tunes the electronic and transport properties of oligothiophenes, oligoselenophenes and oligotellurophenes" (**corresponding author**) Synthetic Metals, 210, 236–244, 2015.
9. T. Furuncuoğlu, B. Dereli, O. Karahan, **S. Salman**, V. Aviyente, "Solvent Effects on Free-Radical Copolymerization of Styrene and 2-Hydroxyethyl methacrylate: A DFT Study", New J. Chem., 38 (1), 170 – 178, 2014.
10. **S. Salman**, J. L. Brédas, S. R. Marder, V. Coropceanu, S. Barlow, "Dipolar Ferrocene and Ruthenocene Second-Order Nonlinear Optical Chromophores: A Time-Dependent Density Functional Theory Investigation of their Absorption Spectra'' Organometallics, 32(20), 6061–6068, 2013.
11. S. Nenon, R. Mereau, **S. Salman**, F. Castet, T. Van Regemorter, S. Clima, D. Beljonne, J. Cornil, "Structural and Electronic Properties of the TTF/ZnO(10-10) Interface: Insights From Modeling" J. Phys. Chem. Lett. 3, 58–63, 2012.
12. **S. Salman**, D. Kim, V. Coropceanu, and J. L. Brédas, "Theoretical investigation of triscarbazole derivatives as host materials for blue electrophosphorescence: Effects of topology" Chem. Mater. 23 (23), 5223–5230, 2011.
13. Y. Zhang, C. Zuniga, S. J. Kim, D. Cai, S. Barlow, **S. Salman**, V. Coropceanu, J. L. Brédas, B. Kippelen and S. Marder "Polymers with Carbazole-Oxadiazole Side Chains as Ambipolar Hosts for Phosphorescent Light-Emitting Diodes" Chem. Mater. 23(17), 4002–4015, 2011.
14. D. Kim, **S. Salman**, V. Coropceanu, E. Salomon, A. Padmaperuma, L. Sapochak, A. Kahn, and J. L. Brédas, "Phosphine Oxide Derivatives as Hosts for Blue Phosphors: A Joint Theoretical and Experimental Study of Their Electronic Structure" Chem. Mater. 22(1), 247–254, 2010.
15. **S. Salman**, M. C. Ruiz Delgado, V. Coropceanu, and J. L. Brédas, "Electronic Structure and Charge-Transport Parameters of Functionalized Tetracene Crystals: Impact of Partial Fluorination and Alkyl or Alkoxy Derivatization" Chem. Mater. 21 (15), 3593–3601, 2009.
16. T. Kinnibrugh, **S. Salman**, Y. Getmanenko, V. Coropceanu, W. W. Porter III, T. V. Timofeeva, A. J. Matzger, J. L. Brédas, S. R. Marder, and S. Barlow "Dipolar Second-Order Nonlinear Optical Chromophores Containing Ferrocene, Octamethylferrocene, and Ruthenocene Donors and Strong pi-Acceptors: Crystal Structures and Comparison of pi-Donor Strengths" Organometallics 28 (5), 1350–1357, 2009.
17. E. F. Valeev, V. Coropceanu, D. A. da Silva Filho, **S. Salman** and J. L. Brédas, "Effect of Electronic Polarization on Charge-Transport Parameters in Molecular Organic Semiconductors" J. Am. Chem. Soc. 128 (30), 9882–9886, 2006.
18. **S. Salman**, D. A. da Silva Filho, V. Coropceanu, J. L. Brédas, Charge-transport properties of conjugated oligomers and polymers: Evolution of electronic coupling, Abstracts of Papers of the American Chemical Society, Volume 231, 2006.
19. **S. Salman**, A. Z. Albayrak, D. Avcı and V. Aviyente, "Synthesis and Modeling of New Phosphorus-Containing Acrylates" J. Polym. Sci. Part A: Polym. Chem. 43, 2574–2583, 2005.
20. H. Günaydin, **S. Salman**, N. Ş. Tüzün, D. Avcı and V. Aviyente, "Modeling the Free Radical Polymerization of Acrylates" Int. J. Quantum Chem. 103, 176–189, 2005.

Conferences, Workshops, Scientific Meetings Attended

1. **S. Salman**, *Attendee*, Pritchett 2022 Materials Innovation Symposium, Georgia Institute of Technology, Atlanta, GA, April 11-12, 2022.
2. **S. Salman**, *Attendee*, HBCU Engagement and Collaboration Workshop and Conference, Mission in Motion 2022, Atlanta, GA, March 28-29, 2022.
3. **S. Salman**, *Poster*, Theoretical characterization of excited states in thermally activated delayed fluorescence copper(I)complexes towards highly efficient organic light-emitting diodes, ACS Spring 2022 meeting, March 23, 2022.

4. **S. Salman**, *Poster*, A Computational Study of Emission Properties of Cu(I) Complexes for Organic Light Emitting Diodes, RSCPoster Twitter conference, March 1-2, 2022.
5. **S. Salman**, *Lightning Talk*, A Computational Study of Emission Properties of Copper(I) Complexes Towards Highly Efficient Organic Light Emitting Diodes, W.E.B Du Bois Data Science Symposium 2022, February 25, 2022.
6. **S. Salman**, *Lightning Talk*, Data-Driven Materials Development for Organic Electronics Technology, W.E.B Du Bois Data Science Symposium, Atlanta University Center, April 23, 2021.
7. **S. Salman,** *Video Presentation*, Quantum-Mechanical Investigation of Structure-Property Relationships in Organic Emitters for Efficient Thermally Activated Delayed Fluorescence (TADF), 2021 Virtual HBCU-UP/CREST PI-PD Meeting. February 5, 2021.
8. **S. Salman**, *Oral presentation*, "Quantum-Chemical Investigation of Charge-Transport and Photophysical Properties of Organic Electronic Materials: Donor-Acceptor Complexes and Organometallics" Clark Atlanta University Department of Chemistry and NSF Center for Sustainable Polymers Introductory Symposium, January 26, 2021.
9. **S. Salman**, *Oral presentation*, Quantum-Mechanical Investigation of Structure-Property Relationships in Organic Emitters for Efficient Thermally Activated Delayed Fluorescence (S.EL14.05.06), MRS Virtual Spring/Fall Meeting and Exhibit, Nov. 28, 2020 thru Dec. 04, 2020.
10. **S. Salman**, Workshop Attendee, ACS Savannah, GA New Faculty Workshop, October 18-19, 2019, Savannah, GA, USA.
11. **S. Salman**, *Board member*, Interface Properties in Organic Electronics: Key Challenges (IPOE 2017), International Organization and Scientific Committee member, Session chair, July 8-11, 2019, Cergy, France.
12. **S. Salman**, *Board member*, Interface Properties in Organic Electronics: Key Challenges (IPOE 2017), International Organization and Scientific Committee member, Session chair, July 10-13, 2017, Cergy, France.
13. **S. Salman**, J-L. Brédas, S. Marder, V. Coropceanu, S. Barlow "Theoretical Characterization of the Optical Properties of Organometallic Pi-Conjugated Donor-Acceptor Chromophores", *Poster*, Theory and Applications of Computational Chemistry (TACC 2016), August 28 – September 2, 2016, University of Washington, Seattle, WA, USA.
14. **S. Salman**, "Dipolar Ferrocene and Ruthenocene Second-Order Nonlinear Optical Chromophores: A Time-Dependent Density Functional Theory Investigation of Their Absorption Spectra", *Talk*, 7th European Symposium on Computing π-Conjugated Compounds (CpiC7), Bordeaux, France, February 12-13, 2016.
15. **S. Salman**, *Attendee*, Materials Research Society Fall Meeting and Exhibition, November 30 – December 5, 2014, Boston, MA.
16. **S. Salman**, J. L. Brédas, S. R. Marder, V. Coropceanu, S. Barlow, "Dipolar Ferrocene and Ruthenocene Second-Order Nonlinear Optical Chromophores: A Time-Dependent Density Functional Theory Investigation of Their Absorption Spectra" *Poster* and *Talk*, International Conference on Applied Informatics for Health and Life Sciences in association with Turkish-German Workshop on Bioinformatics: Recent Developments from Health to Nanotechnology" Kusadasi, Turkey, October 19-22, 2014.
17. MUDEK (Engineering Programs Accreditation Board) Workshop, Ankara, Turkey, 31 May 2014.
18. T. G. Erbay, **S. Salman**, V. Aviyente, "A Computational Approach to the Design of Oligothiophene and Oligoselenophene based Solar Cells" *Poster*, 44th IUPAC World Chemistry Congress, Istanbul, Turkey, August 11-16, 2013.
19. **S. Salman**, D. Kim, V. Coropceanu, J. L. Brédas, "Theoretical Investigation of Triscarbazole Derivatives as Host Materials for Blue Electrophosphorescence", *Poster*, ICSM 2012 International Conference on Science and Technology of Synthetic Metals, Atlanta, GA, July 8-13, 2012.
20. **S. Salman**, "Theoretical Characterization of the Charge-Transport and Electroluminescence Properties of Pi-Conjugated Organic Materials", *Invited Talk*, Chemistry Department, Boğaziçi University, Istanbul, Turkey, May 4, 2011.

21. **S. Salman**, S. Clima, J. Idé, R. Méreau, L. Ducasse, J. Cornil, D. Beljonne, and F. Castet, "Modelling of Electronic Processes at Interfaces in Organic-based Electronic Devices", *Poster*, International Symposium on Functional π-Electron Systems, Georgia Institute of Technology – Atlanta, GA, May 23-28, 2010.
22. **S. Salman**, "Theoretical Characterization of the Charge-Transport and Electroluminescence Properties of Pi-Conjugated Organic Materials", *Talk*, Institute of Molecular Sciences, Université Bordeaux I, France, November 3, 2009.
23. **S. Salman**, D. Kim, V. Coropceanu, J. L. Brédas, "Theoretical investigation of host materials for efficient blue electrophosphorescence" *Poster*, 2nd Solvay-COPE Symposium on Organic Electronics, Atlanta, GA, May 6, 2008.
24. **S. Salman**, D. Kim, I. Rudra, V. Coropceanu, J. L. Brédas, "Theoretical investigation of host materials for efficient blue electrophosphorescence" *Poster*, MRS Spring Meeting, San Francisco, CA, March 24-28, 2008.
25. **S. Salman**, K. Schmidt, I. Rudra, J. L. Brédas, U. C. Yoon, M. H. Hyun, H. J. Choi, Z. Jing, "Theoretical investigation of the ligand role in the emission properties of cyclometalated heteroleptic iridium complexes", *Poster*, 9th European Conference on Molecular Electronics, Metz, France, September 5-8, 2007.
26. K. Schmidt, **S. Salman**, I. Rudra, J. L. Brédas, U. C. Yoon, M. H. Hyun, H. J. Choi, Z. Jing, "Theoretical investigation of the emission properties of homoleptic and heteroleptic cyclometalated iridium complexes" *Poster*, 9th European Conference on Molecular Electronics, Metz, France, September 5-8, 2007.
27. Addison, V. Coropceanu, **S. Salman**, J. L. Brédas, "Electronic Properties of a Series of Fused Polycyclic Organic Structures" *Poster*, REU 2007 (Research Experience for Undergraduate) Program, Georgia Institute of Technology, Atlanta, GA, August 2, 2007.
28. **S. Salman**, K. Schmidt, I. Rudra, and J. L. Brédas, "Triplet emitters for OLED applications: Theoretical analysis of emission properties in iridium complexes" *Poster*, Solvay-COPE symposium on Organic Electronics, Georgia Institute of Technology, Atlanta, GA, May 8, 2007.
29. D. A. da Silva Filho, V. Coropceanu, E. G. Kim, **S. Salman**, R. S. Sánchez-Carrera, M. C. Ruiz-Delgado and J. L. Brédas, "Theoretical characterization of crystalline organic semiconductors" *Poster*, 100 Years of Chemistry at Tech, Atlanta, April 18, 2007.
30. K. Schmidt, S. Ohira, I. Rudra, **S. Salman**, V. Coropceanu and J. L. Brédas, "Modeling of excited states to explore non-linear optical and energy transfer processes" *Poster*, 100 Years of Chemistry at Tech, Atlanta, April 18, 2007.
31. **S. Salman**, V. Coropceanu, D. A. da Silva Filho, E. F. Valeev and J. L. Brédas, "Charge-Transport Parameters in Organic Crystals" *Poster*, Gordon Research Conferences – Electronic Processes in Organic Materials, Mount Holyoke College, South Hadley, MA, July 30 - August 4, 2006.
32. **S. Salman**, E. F. Valeev, V. Coropceanu, D. A. da Silva Filho and J. L. Brédas, "Charge-Transport Properties of Conjugated Oligomers and Polymers: Evolution of Electronic Coupling" *Poster*, 231st ACS National Meeting, Atlanta, GA, March 26-30, 2006.
33. V. Aviyente, D. Avcı, H. Günaydın, N. Tüzün, **S. Salman**, İ. Değirmenci, Modelling structure-property relationships in acrylate derivatives, Oral, XIX. National Chemistry Congress, Kuşadası, Turkey, September 30 - October 4, 2005.
34. İ. Değirmenci, **S. Salman**, D. Avcı and V. Aviyente, "Modeling the Reactivity of New Phosphorus-Containing Acrylates" *Poster*, 15th European Symposium on Quantitative Structure-Activity Relationships and Molecular Modeling, Istanbul, Turkey, September 5-10, 2004.
35. V. Aviyente, **S. Salman**, A. Z. Albayrak and D. Avcı, "Synthesis and Modeling of New Phosphorus-Containing Acrylates" *Poster*, Molecular Quantum Mechanics – Conference in Honor of Nicholas Handy, St John's College, Cambridge University, England, July 24-29, 2004.
36. **S. Salman**, V. Aviyente and D. Avcı, "Modeling the Reactivity of Phosphonic Acid Monomers in Free Radical Polymerization" *Poster*, Density Functional Theory in Chemistry and Physics, Free University of Brussels, Belgium, September 7-12, 2003.

Fellowships, Honors, Awards & Certificates

- Recognized as the *Featured Affiliate* by the Atlanta University Center Data Science Initiative in September 2021.
- Recipient of Summer Research Development Award, Atlanta University Center Data Science Initiative (AUC DSI), June 01 through August 31, 2021.
- Recipient of 'Paris/Seine Initiative for Excellence in Research' Award, Institute for Advanced Studies (IAS), University of Cergy-Pontoise. Recipient of Research Grants for visiting faculty, IAS, since 2015
- Online Teaching Certification (tTEC), Office of Online Learning and Continuing Education at Clark Atlanta University, July 23, 2020
- Postdoctoral fellowship, European Union MINOTOR project, Université Bordeaux I (2009-2010)