

ASELA SAMPATH DIKKUMBURA, Ph.D.

Senior Lecturer

Department of Chemistry

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EDUCATION

- Ph.D. in Chemistry–Louisiana State University, Baton Rouge, Louisiana, USA (2021), GPA: 3.97, Dissertation: *Colloidal nanomaterial surface chemistry and characterization studied by linear and nonlinear spectroscopy*, Advisor: Prof. Louis H. Haber.
- M.S. in Chemistry–Eastern Illinois University, Charleston, Illinois, USA (2016), GPA: 3.92, Thesis: *Structure and Nuclear Quadrupole Coupling Tensors of 1,2–Dichloroethane, 1–Chloro–2–Fluoroethane, and 2,3–Dichloropropene Studied Using Microwave Spectroscopy and Computational Chemistry*, Advisor: Prof. Rebecca A. Peebles.
- B.S. (Special) in Chemistry–University of Sri Jayewardenepura (2008), Major: Chemistry, Minors: Polymer Science and Technology and Physics, Status: Second Class Honors Upper Division Pass, Thesis: *Preparation of Silver Nanoparticles and Investigation of Spectral Properties*, Advisor: Prof. Pradeep. M. Jayaweera.

EMPLOYMENT HISTORY/TEACHING EXPERIENCE

- Senior Lecturer (G II), Department of Chemistry, Faculty of Natural Sciences, The Open University of Sri Lanka, Nawala, Nugegoda, Sri Lanka. (November 2016–Present),
- Lecturer (Confirmed), Department of Chemistry, Faculty of Natural Sciences, The Open University of Sri Lanka, Nawala, Nugegoda, Sri Lanka. (November 2011–November 2016),
- Graduate and Research Assistant, Department of Chemistry, Louisiana State University, Baton Rouge, Louisiana, USA. (Fall 2016–Fall 2021)
- Graduate and Research Assistant, Department of Chemistry, Eastern Illinois University Charleston, Illinois, USA. (Fall 2014–Spring 2016)
- Temporary Lecturer (January 2011–October 2011) and Temporary Demonstrator (June 2009–January 2011), Department of Chemistry, Faculty of Natural Sciences, The Open University of Sri Lanka, Nawala, Nugegoda, Sri Lanka.
- Temporary Demonstrator, Department of Chemistry, Faculty of Applied Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka. (July 2008–May 2009)
- Temporary Visiting Lecturer, Department of Pharmacology and Department of Medical education, Faculty of Medical Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka. (July 2008–May 2009)

HONORS

Louisiana State University

- COATES Research Travel Award (Fall 2021)
- Outstanding Teaching Assistant Scholar Award (Spring 2021)
- 1st Place Poster Award in Nanoscience Division–2020 National NOBCCChE Conference (Fall 2020)
- Graduate Student Association Travel Award (Spring 2020)
- Outstanding Teaching Assistant Scholar Award (Spring 2018)

- Membership Rewards Academic Excellence of The Honor Society of Phi Kappa Phi Chapter at Louisiana State University (Spring 2017)

Eastern Illinois University

- Master's Thesis Award of Excellence in the College of Sciences (Spring 2017)
- Distinguished Graduate Student Award for Chemistry–Graduate School (Spring 2016)
- Graduate Student Investigator Award for Chemistry Research–College of Sciences (Spring 2016)
- Distinguished Graduate Student Award–Department of Chemistry (Spring 2016)
- Outstanding Teaching Assistant Award–Department of Chemistry (Spring 2016)
- Best Graduate Student Poster Award–Sigma Xi Scientific Society Banquet (Spring 2016)
- Chemistry Department Representative–Graduate Student Advisory Council (Fall 2015–Spring 2016)
- Research Assistantship–Drs. Rebecca and Sean Peebles, Supervisors (Summer 2015 and Summer 2016)

University of Sri Jayewardenepura

- Chemistry Department Chief Coordinator, 50th Anniversary Exhibition of University of Sri Jayewardenepura, 2008

ACTIVITIES

Louisiana State University

- Historian–Chemistry Graduate Student Council (Fall 2018–Spring 2019), President–Sri Lankan Student Association at LSU (Fall 2016–Spring 2020), American Red Cross Blood Donor (Fall 2016–Fall 2021)

Eastern Illinois University

- American Chemical Society–Student Affiliates (Fall 2014–Spring 2016), International Student Ambassador (Spring 2015–Fall 2015), Association of International Students (Fall 2014–Spring 2016), American Red Cross Blood Donor (Fall 2014–Fall 2016)

University of Sri Jayewardenepura

- Chemistry Department Chief Coordinator, 50th Anniversary Exhibition of University of Sri Jayewardenepura (2008)
- Chemical Society, Department of Chemistry, Junior Treasurer (2007–2008) and Committee Member (2004–2005)
- Students Union, Faculty of Applied Sciences, Junior Treasurer (2005–2006) and Committee Member (2004–2005)
- College Chief Announcer at The Science Faculty Talent Show (2005–2007) and The Musical Evening (2004)

PRESENTATIONS

- Oral Presentation, American Chemical Society Southwest Regional Meeting and Exposition, Austin, Texas (Fall 2021)
- Oral Presentation, 48th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers National Meeting and Exposition (Virtual Conference–Fall 2021)
- Poster Presentation, American Chemical Society National Meeting and Exposition (Virtual Conference–Spring 2021)
- Poster Presentation, 47th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers National Meeting and Exposition. (Virtual Conference–Fall 2020)

- Oral Presentation, 46th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers National Meeting and Exposition, St. Louis, Missouri (Fall 2019)
- Poster Presentation, 45th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers National Meeting and Exposition, Orlando, Florida (Fall 2018)
- Poster Presentation, 255th American Chemical Society National Meeting and Exposition, New Orleans, Louisiana (Spring 2018)
- Poster Presentation, Student Research and Creative Discovery Conference 2017, Eastern Illinois University (Spring 2017)
- Oral Presentation, 71st International Symposium on Molecular Spectroscopy, University of Illinois at Urbana Champaign (Summer 2016)
- Poster Presentation, Student Research and Creative Discovery Conference 2016, Eastern Illinois University (Spring 2016)
- Poster Presentation, 19th Annual Sigma Xi Scientific Research Society Banquet, Eastern Illinois University (Spring 2016)
- Poster presentation, 251st American Chemical Society National Meeting and Exposition, San Diego, California (Spring 2016)
- Poster presentation, Student Research Celebration, Department of Chemistry, Eastern Illinois University (Fall 2015)

CONFERENCES

- Participated in the American Chemical Society Southwest Regional Meeting and Exposition, Austin, Texas (Fall 2021)
- Virtually Participated in the 48th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers National Meeting and Exposition. (Fall 2021)
- Virtually Participated in the American Chemical Society National Meeting and Exposition. (Spring 2021)
- Virtually Participated in the 47th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers National Meeting and Exposition. (Fall 2020)
- Participated in the 46th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers National Meeting and Exposition, St. Louis, Missouri (Fall 2019)
- Participated in the 45th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers National Meeting and Exposition, Orlando, Florida (Fall 2018)
- Participated in the 255th American Chemical Society National Meeting and Exposition, New Orleans, Louisiana (Spring 2018)
- Participated in the 71st International Symposium on Molecular Spectroscopy, University of Illinois at Urbana Champaign (Summer 2016)
- Participated in the 251st American Chemical Society National Meeting and Exposition, San Diego, California (Spring 2016)
- Participated in the 70th International Symposium on Molecular Spectroscopy, University of Illinois at Urbana Champaign (Summer 2015)

WORKSHOPS

- Attended a Two-Day Synchrotron Based Far-IR Vibrational–Rotational Spectroscopy Workshop Organized by the Canadian Light Source (University of Saskatchewan, Saskatchewan, Canada)–University of Illinois at Urbana Champaign (Summer 2015)

PUBLICATIONS

- **Dikkumbura, A. S.**; Aucoin, A. V.; Ali, R. O.; Schneider, G. J.; Haber, L. H. Influence of Acetaminophen on Molecular Adsorption and Transport Properties at Colloidal Liposome Surfaces Studied by Second Harmonic Generation Spectroscopy. *Langmuir* **2022**, 38, 3852–3859.
- **Dikkumbura, A. S.**; Hamal, P.; Chen, M.; Babayode, D. A.; Ranasinghe, J. C.; Lopata, K.; Haber, L. H. Monitoring the Growth Dynamics of Colloidal Silver–Gold Core–Shell Nanoparticles Using In–Situ Second Harmonic Generation and Extinction Spectroscopy. *J. Phys. Chem. C* **2021**, 125, 46, 25615–25623.
- Abu-Laban, M.; Hamal, P.; Arrizabalaga, J. H.; Forghani, A.; **Dikkumbura, A. S.**; Kumal, R. R.; Haber, L. H.; Hayes, D. J. Combinatorial Delivery of miRNA–nanoparticle Conjugates in Human Adipose Stem Cells for Amplified Osteogenesis. *Small*. **2019**, 1902864–1902878.
- Ranasinghe, J. C.; **Dikkumbura, A. S.**; Hamal, P.; Chen, M.; Khoury, R. A.; Smith, H. T.; Lopata, K.; Haber, L. H. Monitoring the Growth Dynamics of Colloidal Gold–Silver Core–Shell Nanoparticles Using In–Situ Second Harmonic Generation and Extinction Spectroscopy. *J. Chem. Phys.* **2019**, 151, 224701–224709
- Khoury, R. A.; Ranasinghe, J. C.; **Dikkumbura, A. S.**; Hamal, P.; Kumal, R. R.; Karam, T. E.; Smith, H. T.; Haber, L. H. Monitoring the Seed-Mediated Growth of Gold Nanoparticles using In–Situ Second Harmonic Generation and Extinction Spectroscopy. *J. Phys. Chem. C* **2018**, 122, 24400–24406.
- Jang, H.; Ka, S.; **Dikkumbura, A. S.**; Peebles, R. A.; Peebles, S. A.; Oh, J. J. Microwave Spectrum, Structure and Dipole Moment of 4–Fluorophenylacetylene (4FPA). *J. Mol. Struct.* **2017**, 1133, 320–328.
- Bandarage, G.; Zoysa, M. N. K. De.; **Dikkumbura, A. S.**; Loganathan, S. Assessment of Thinking Skills in a Non–Traditional Undergraduate Chemistry Laboratory Class. Annual Academic Sessions of the Open University of Sri Lanka. **2013**, 18, 78–81.
- **Dikkumbura, A. S.**; Hemalika, D.V.D.; Haniffa, M.R.M.; Zoysa, M. N. K. De. Physical Chemistry Foundation Level–Book IV. Published by the Open University of Sri Lanka, **2013**, ISBN: 978–955–23–1403–2.
- Bandarage, G.; Zoysa, M. N. K. De.; **Dikkumbura, A. S.**; Makandu, A. A Novel Approach in Transforming a Recipe Driven Laboratory Class in Chemistry to a Thinking Oriented Laboratory Class. Annual Academic Sessions of the Open University of Sri Lanka. **2011**, 82, 307–310.

PROFESSIONAL MEMBERSHIPS

- American Chemical Society
- National Organization for the Professional Advancement of Black Chemists and Chemical Engineers
- Phi Kappa Phi
- The Institute of Chemistry Ceylon
- The Sri Lanka Association for the Advancement of Science

REFERENCES

Dr. Louis H. Haber
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