RAM S. BHATTA, Ph.D.

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PROFESSIONAL APPOINTMENTS

- Senior Lecturer of Chemistry (08/2024 – present), Texas A&M University-San Antonio
- Lecturer of Chemistry (08/2018 – 08/2024), Texas A&M University-San Antonio, TX
- Adjunct Chemistry Faculty (08/2017 – 08/2018), University of the Incarnate Word, TX
- Postdoctoral Research Associate (01/2016 – 12/2016), UNT Health Science Center, TX
- Postdoctoral Research Associate (12/2012 – 01/2016), The University of Akron, OH
- Teaching and Research Assistant (01/2008 – 12/2012), The University of Akron, OH
- Lecturer of Chemistry (10/2002 – 04/2007), Acme Engineering College, Nepal

EDUCATION

- *Ph.D., Physical Chemistry* (*2008 – 2012*), The University of Akron, OH
- *M. Sc., Chemistry* (*2000 – 2002*), Tribhuvan University, Nepal
- *B. Sc., Chemistry* (*1996 – 1999*), Tribhuvan University, Nepal

TEACHING EXPERIENCE

- ~10 years of experience of teaching varieties of undergraduate chemistry courses
- Experience of designing & reviewing undergraduate courses as well as lab handouts
- Experience of promoting active learning techniques (earned **ACUE** Micro credentials)

List of courses taught at Texas A&M University-San Antonio

CHEM 1311 General Chemistry I
CHEM 2323 Organic Chemistry I
STEM 4101 Jaguar Track IV-Science/Math
CHEM 1111 General Chemistry I Lab
CHEM 2123 Organic Chemistry I Lab
CHEM 4101 Physical Chemistry I Lab
CHEM 1312 General Chemistry II
CHEM 2325 Organic Chemistry II
CHEM 4301 Physical Chemistry I
CHEM 1112 General Chemistry II Lab
CHEM 2125 Organic Chemistry II Lab

DEPARTMENT/COLLEGE/UNIVERSITY/OTHER SERVICES

- Served as an event coordinator in regional science Olympiad held at Texas A&M University-San Antonio (Spring, 2025)
- Participated in Faculty Development Training (Spring, 2025)
- Designed and taught a new green chemistry experiment for CHEM2125 (Spring, 2025)
- Participated in Outcome Based Instruction-Faculty Development Training (Fall, 2024)
- Participated in peer-teaching evaluation activates (Fall, 2024)
- Participated in Texas Advanced Computing Center (TACC) for computing resources (2024)
- Designed and taught new Physical Chemistry I course (Spring, 2024)
- Developed new laboratory handouts and taught Physical Chemistry I lab (Spring, 2024)

- Served as a search committee member for a position of *a tenure-track Assistant Professor of Analytical Chemistry* (Spring, 2024)
- Served as a search committee member for positions of *tenure-track Assistant Professor of Physical/Inorganic Chemistry* (Spring, 2024)
- Served as an event coordinator in regional science Olympiad held at Texas A&M University-San Antonio (Spring, 2024)
- Served as a review board member for Advances in Science, Technology and Engineering Systems Journal (ASTESJ) (https://www.astesj.com/reviewer-directory/ , reviewer code: AJR06884) (2024)
- Served as a search committee member for a position of an *Adjunct Faculty of Chemistry* (2023)
- Served as a search committee member for a position of *a tenure-track Assistant Professor of Chemistry* (2023)
- Contributed to adopting new Organic Chemistry textbook and designing Students Learning Outcomes (SLOs) (2022)
- Contributed to review course inventory (in particular, Physical Chemistry I, Physical Chemistry II & Computational Chemistry courses) for Chemistry Program (2021)
- Contributed to the NSF:MRI-HPC proposal at Texas A&M University-San Antonio with a project designed for teaching and research (organic solar cell materials) (2020)
- Served as an event coordinator in regional science Olympiad held at Texas A&M University-San Antonio (2020)
- Reviewed Laboratory manuals (lab handouts) for general chemistry II (2019)
- Designed a new course called Computational Chemistry (2019)
- Contributed to writing Chemistry Program Proposal (2019)
- Served as a judge in Boosting Engineering, Science and Technology (BEST) competition held at St Mary's University, San Antonio (2019)
- Served as a judge in a high school science fair held at John Jay Science and Engineering Academy, San Antonio (2018)

COMPUTATIONAL RESEARCH GRANTS (SUs = Service Units i.e. CPU hours, not $ amount)

- Texas Advanced Computing Center (TACC) Lonestar6-GPU-820888, "*First-principles calculations of polymer materials" Ram S. Bhatta*, 2023 (1,000 SUs).
- Texas Advanced Computing Center (TACC) G-820888, "*First-principles calculations of polymer materials" Ram S. Bhatta*, 2022 (1,000 SUs).
- Texas Advanced Computing Center (TACC) G-820888, "*First-principles calculations of interfacial properties in organic solar cell materials" Ram S. Bhatta*, 2021 (2,100 SUs).
- Texas Advanced Computing Center (TACC) DMR140147, "*First-principles studies of organic solar cells" PI: Ram Bhatta,* Co-PI: Mesfin Tsige, 2015 (100,000 SUs).
- Texas Advanced Computing Center (TACC) TG-CHE140067, "*Structure-property relationships in conjugated polymers" Ram S. Bhatta*, 2014 (30,000 SUs).

AWARDS AND HONOR

- *The Dr. Harold G. Cassidy Award* in Chemistry, The University of Akron (2011): Outstanding graduate student research award in the Chemistry Department
- *Coblentz Society Student Award* (2010): Outstanding research award in Vibrational Spectroscopy worldwide (http://www.coblentz.org/awards/coblentz-student-awards)
- *Golden key international honor* (2008)

UNDERGRADUATE RESEARCH MENTORING EXPERIENCE

- Mentored *Brandon Yang* (Chemical Physics Letters, 635 (2015) 139)
- Mentored *Prasad Iyer* (*Modern Physics Letters B*, 28 (2014) 1430014)
- Mentored *Jonathan Martens* (Research conference, University of Akron, 2011)
- Mentored *Amy Gao* (*Journal of Molecular Structure: THEOCHEM, 941 (2010) 22*)

PUBLICATIONS [* indicates the corresponding author]

- Kun Yang, Xiang Li, Yi-Fan Huang, Ram S. Bhatta, Jiawei Liu, Mesfin Tsige, Chien-Lung Wang, Stephen Z.D.Cheng, Yu Zhu*, *Polymer, 160 (2019) 238.*
- Haichang Zhang, Kun Yang, Yu-Ming Chen, ***Ram S. Bhatta***, Mesfin Tsige, Stephen ZD Cheng, Yu Zhu*, *Macromolecular Chemistry and Physics, 218 (2017) 1600617.*
- ***Ram S. Bhatta****** and Mesfin Tsige*, *Polymer, 75 (2015) 73.*
- Chang Liu, Chao Yi, Kai Wang, Yali Yang, ***Ram S. Bhatta***, Mesfin Tsige, Shuyong Xiao, and Xiong Gong*, *ACS Applied Materials & Interfaces, 7 (2015) 4928***.**
- ***Ram S. Bhatta****, G. Pellicane and Mesfin Tsige*, *Computational and Theoretical Chemistry, 1070 (2015) 14*.
- Yeneneh Y. Yimer, Brandon Yang, ***Ram S. Bhatta*** and Mesfin Tsige*, *Chemical Physics Letters, 635 (2015) 139*.
- ***Ram S. Bhatta****** and Mesfin Tsige*, *International Journal of Photoenergy, 2015 (2015) 1*. (Invited article)
- ***Ram S. Bhatta****** and Mesfin Tsige*, *Polymer, 56 (2015) 293***.**
- Mahesh Dawadi, ***Ram S. Bhatta*** and David S. Perry*, *Chemical Physics Letters, 624 (2015) 53*. (Editor's choice)
- Jiayuan Miao, ***Ram S. Bhatta***, Darrell H. Reneker, Mesfin Tsige and Philip L. Taylor*, *Polymer, 56 (2015) 482***.**
- ***Ram S. Bhatta****** and Mesfin Tsige*, *ACS Applied Materials & Interfaces*, 6 (2014) 15889**.**
- ***Ram S. Bhatta****, Prasad P. Iyer, Ali Dhinojwala and Mesfin Tsige*, *Modern Physics Letters B,* 28 (2014) 1430014 (invited article).
- He Zhu, Kshitij Jha, ***Ram S. Bhatta*****,** Mesfin Tsige and Ali Dhinojwala*, *Langmuir*, 30 (2014) 11609.
- ***Ram S. Bhatta****** and Mesfin Tsige*, ***Polymer,*** 45 (2014) 2667.
- ***Ram S. Bhatta***, Mesfin Tsige and Devid Perry*, *Journal of Computational and Theoretical Nanoscience*, 11 (2014) 2157.
- ***Ram S. Bhatta****, Devid Perry and Mesfin Tsige*, *Journal of Physical Chemistry A, 117 (2013) 12628*.
- Mahesh B. Dawadi**, *Ram S. Bhatta*** and Devid Perry*, *Journal of Physical Chemistry A*, 117 (2013) 13356.
- ***Ram S. Bhatta***, Yeneneh Yimer, Devid Perry and Mesfin Tsige*, *Journal of Physical Chemistry B*, 117 (2013) 10035.
- ***Ram S. Bhatta*** and David Perry*, *Computational and Theoretical Chemistry, 1008 (2013) 90*.

- ***Ram S. Bhatta***, Yeneneh Yimer, Mesfin Tsige and David Perry*, *Computational and Theoretical Chemistry, 995 (2012) 36*.
- ***Ram S. Bhatta***, Amy Gao and David S Perry*, *Journal of Molecular Structure: THEOCHEM, 941 (2010) 22*.

SELECTED RESEARCH PRESENTATIONS

- ***Ram S. Bhatta*** and Mesfin Tsige, *"Small Conjugated Molecules: Orbital Energy Modeling Using Tuned Range-Separated Functional",* American Physical Society March Meeting, March 2-6, 2015, San Antonio, TX, USA. (http://meeting.aps.org/Meeting/MAR15/Session/G41.6)
- ***Ram S. Bhatta***, David Perry and Mesfin Tsige, *"First principles calculations of conformational and electronic properties of PTB7",* American Physical Society March Meeting, March 3-7, 2014, Denver, CO, USA. (http://meetings.aps.org/Meeting/MAR14/Session/S1.9)
- ***Ram S. Bhatta***, David Perry and Mesfin Tsige, *"First principles calculations of conformational and electronic properties of PTB7",* American Physical Society March Meeting, March 3-7, 2014, Denver, CO, USA. (http://meetings.aps.org/Meeting/MAR14/Session/S1.9)
- ***Ram S. Bhatta***, Mesfin Tsige and David Perry, *"Frontier Orbital Energy Change of Poly(3-hexylthiophene) oligomers: Effect of Large Amplitude Torsional Motion",* American Physical Society March Meeting-2013, Baltimore. (http://meetings.aps.org/Meeting/MAR13/Event/187921)
- ***Ram S. Bhatta***, Yeneneh Yimer, David Perry and Mesfin Tsige, *"An Improved Force-field for Molecular Modeling of Crystalline Poly(3-hexylthiophene)",* American Physical Society March Meeting-2012, Boston. (http://meetings.aps.org/Meeting/MAR12/Event/163128)
- ***Ram S. Bhatta***, Yeneneh Yimer, Mesfin Tsige and David Perry, *"Conformational Dependence of Charge Transport and Band Gap in Poly (3-Hexyl Thiophene) Oligomers",* American Physical Society Spring Meeting, 2011. (http://meeting.aps.org/Meeting/OSS11/Event/150093)
- ***Ram S. Bhatta*** and David S Perry, *"Ab Initio Trosion-Wag Surface for the Ethyl Radical"*, American Physical Society March Meeting, 2009. (http://meetings.aps.org/Meeting/MAR09/Event/98948)
- ***Ram S. Bhatta,*** *Mahesh B. Dawadi* and Devid Perry, "Coupling of the C-H stretch to large-amplitude torsion and inversion motions: comparison of CH_3CH_2, $CH_3OH_2^+$ and CH_3NH_2", International Symposium on Molecular Spectroscopy, OSU, Columbus, June, 2013. [https://molspect.chemistry.ohio-state.edu/symposium/Program/RH.html
- ***Ram S. Bhatta***, Yeneneh Yimer, Mesfin Tsige and David Perry, *"Inter-ring and Hexyl Chain Torsional Potentials in Poly (3-hexylthiophene) Oligomers"*, International Symposium on Molecular Spectroscopy, OSU, Columbus, June, 2011.

PROFESSIONAL ACTIVITIES

- Advances in Science, Technology and Engineering Systems Journal (ASTESJ reviewer)
- American Chemical Society (JPC reviewer)
- Royal Society of Chemistry (Analyst reviewer)
- Springer publications (NRL reviewer)
- American Physical Society (member, 2009-2015)