THINH NGUYEN

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Education

Texas A&M University • College Station, Texas **Aug. 2023 – Present**
PhD in Chemistry

West Texas A&M University • Canyon, Texas **May 2023**
M.S. in Interdisciplinary Studies, Specialization: Chemistry **GPA: 4.00/4.00**

Thesis*:* Fermi surface studies of the Dirac Type-II Semimetal candidates (Ni, Zr) Te_2 using high field torque magnetometry

West Texas A&M University • Canyon, Texas **May 2021**
B.S. in Biochemistry and minor in Mathematics **GPA: 3.88/4.00**

Awards

- **2017 – 2023**: West Texas A&M University President's and Dean's List
- **2020 – 2022**: Welch Foundation Fellowship
- **2022**: 1st Place in WTAMU Student Research Conference
- **2021**: 3rd Place in WTAMU Student Research Conference

Grants and Scholarship

- **2022 – 2023**: Graduate School Scholarship
- **2022 – 2023**: R.E. Barineu Research Scholarship
- **2021 – 2022**: CRRSA Scholarship
- **2021 – 2022**: KRC Graduate Research Grant
- **2020 – 2021**: Sam Wallas & Helen Cowan Huggins Provost Leadership Scholarship
- **2020 – 2021**: KRC Undergraduate Research Grant
- **2018 – 2021**: West Texas A&M General Scholarship

Research Experience

West Texas A&M University **Aug. 2021 – May 2023**
Advisor: Dr. Keshav Shrestha

Projects:

- **Fermi surface studies of XTe_2 family with X = Ni, Zr**

- Utilizing cutting-edge instruments at the National High Magnetic Field Laboratory (NHMFL), Tallahassee, Florida and OriginLab software to study the fermi surface properties of $NiTe_2$ and $ZrTe_2$ under the temperature as low as 0.32 K and a magnetic field up to 35 T.

- **Fermi surface studies of XV_3Sb_5 family with X = Cs, K, Rb**
  - First CsV_3Sb_5 sample fermi surface studies were conducted under a magnetic field up to 35 T and a temperature of 0.32 K at NHMFL.
  - Second CsV_3Sb_5 sample along with RbV_3Sb_5 and KV_3Sb_5 fermi surface studies were conducted under the same temperature of 0.32 K but with a higher magnetic field of 41.5 T for angle dependence data and 45 T for temperature-dependent data.
  - Studies of CsV_3Sb_5 samples under low temperature, high magnetic field, and high pressure up to 1.49 GPa.
- **Fermi surface studies of ScV_6Sn_6**
  - Fermi surface studies of novel material ScV_6Sn_6 under low temperature and high magnetic field up to 42.85 T.

Publications (Peer-reviewed)

- K. Shrestha, B. Regmi, G. Pokharel, S. G. Kim, S.D. Wilson, D. E. Graf, B.A. Magar, C. Phillips, and **T. Nguyen**, "Electronic properties of Kagome metal ScV_6Sn_6 using high-field torque magnetometry", *Physical Review B* **108 (24)**, 245119 **(2023)**

- K. Shrestha, M. Shi, B. Regmi, **T. Nguyen**, D. Miertschin, K. Fan, L. Z. Deng, D. E. Graf, X. Chen and C. W. Chu, "High quantum oscillation frequencies in the Kagome superconductor KV_3Sb_5 probed by torque magnetometry up to 45 T", *Physical Review B* **107 (15)**, 155128 **(2023)**

- K. Shrestha, M. Shi, **T. Nguyen**, D. Miertschin, K. Fan, L. Z. Deng, D. E. Graf, X. Chen, and C. W. Chu, "Fermi surface mapping of the Kagome superconductor RbV_3Sb_5 using de Haas-van Alphen oscillations", *Physical Review B* **107 (7)**, 075120 **(2023)**

- **T. Nguyen**, N. Aryal, Bal K. Pokharel, L. Harnagea, D. Mierstchin, Dragana Popović, D. E. Graf, and K. Shrestha, "Fermiology of the Dirac type-II semimetal candidates (Ni, Zr)Te_2 using de Haas-van Alphen oscillations", *Physical Review B* **106 (7)**, 075154 **(2022)**

- K. Shrestha, R. Chapal, Bal K. Pokharel, D. Miertschin, **T. Nguyen**, X. Zhou, D.Y. Chung, M. G. Kanatzidis, J. F. Mitchell, U. Welp, Dragana Popović, D. E. Graf, B. Lorenz, and W. K. Kwok, "Nontrivial Fermi surface topology of the kagome superconductor CsV_3Sb_5 probed by de Haas-van Alphen oscillations", *Physical Review B* **105 (2)**, 024508 **(2022)**

Scientific Conference

- **T. Nguyen**, L. Harnagea, D. Miertschin, Bal K. Pokharel, Dragana Popović, D. E. Graf and K. Shrestha, "Fermi surface studies of type-II Dirac semimetal candidate $NiTe_2$ using de Haas-van Alphen oscillations", *APS March Meeting 2022*, Chicago, IL.

- **T. Nguyen**, N. Poudel, D. Miertschin, M. Chou, H. D. Yang, K. Gofryk and K. Shrestha, "Large Magnetoresistance and Fermi Surface Studies of $Sb_2Te_{2-x}Se_x$ Single Crystals", *APS March Meeting 2021,* Virtual.

Teaching Experience

Texas A&M University

- **Graduate Assistant** **Aug. 2023 – Present**
  - Teaching Chemistry Laboratory in both General Chemistry 119 and 120.
  - Helped students improve their laboratory skills and techniques by creating a safe and comfortable environment for learning.

West Texas A&M University

- **Graduate Assistant** **Sept. 2021 – May 2023**
  - Teaching Physics Laboratory in both General physics and Calculus-based physics.
  - Helped students develop problem-solving skills through physics related experiments.
- **Physics Lab Teaching Assistant** **Sept. 2020 – May 2021**
  - Teaching physics labs for General Physics 1 and General Physics 2.
  - Provide the students with a comfortable environment so they can learn better by participating in the experiments as well as asking questions.
- **Math Lab Tutor** **Sept. 2018 – May 2021**
  - Working as a team, assisting students with math problems, ranging from College Algebra to Calculus II.
  - Encourage students to constantly practice and improve their problem-solving skills.
- **Grader for Physics Courses** **Sept. 2020 – Dec. 2020**
  - Grading assignments for General Physics 1
  - Provide students with corrections so they can improve and get better results on the exam.
- **Math Lab Grader** **Oct. 2018 – Dec. 2020**
  - Grading assignments for College Algebra, Pre-Calculus, and Math Education.
  - Provide students with corrections so they can improve and get better results on the exam.