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To: Department of Physics,
Texas Tech University.

Dear Professor Robert Duncan,

Dear Search Committee Members,

I am writing with great interest to apply for the Assistant Professor position in the area of Condensed Matter Physics in the Department of Physics at Texas Tech University. Currently, I work as an assistant research scientist in the Department of Electrical Engineering and Computer Science at the University of Michigan, where I am leading a collaborative research program in magneto-optics. With an excellent scientific experience in physics and materials science together with my passion for science and education, I am confident that I would become a highly effective faculty member in your department.

I obtained my Ph.D. degree in materials science at Delft University of Technology in the Netherlands. Where I successfully conducted my research in ultrafast excitation dynamics of nano-materials. One of my significant accomplishments was the demonstration of carrier multiplication in various quantum dots. This result advanced highly efficient optoelectronic devices such as photovoltaics and photodetectors. Afterward, I completed eight years as postdoctoral fellows and research scientists at the University of Amsterdam, at the University of Texas at Austin, at Columbia University, and now at the University of Michigan. My research is in cutting-edge science and technology covering a wide spectrum of experimental physics and materials, ranging from fundamental research to devices. My research interests include the ultrafast spectroscopic study of novel physical properties of nanostructured materials, conjugated molecules, nanostructured graphene, metal halide perovskites, superatomic solids, and the interaction of magnetic field of light with matters. I have successfully conducted research independently as well as in collaboration with scientists from across many disciplines. I have authored and co-authored 48 publications, including four in the *Nature* research journals, three in *Science Advances*, six in *Nano Letters*, and eight in the *Journal of the American Chemical Society* with a total citation of 3,800+. Please refer to my Curriculum Vitae for detailed information regarding my research experiences and contributions.

At Texas Tech University, I would build a diverse, vigorous, and externally funded research program in the area of Condensed Matter Physics. The study would include, but are not limited to, synthesis and characterization of magnetic nanostructured materials including superatomic solids, ferroelectric perovskites, and 2D magnetic materials, and ultrafast excitation kinetic study of these materials and devices. I will establish a vibrant training program with research involving both undergraduate and graduate students and providing them with unique opportunities to participate in the leading edge interdisciplinary sciences. Texas Tech University is a vibrant academic and research institution with the world-class multi-disciplinary laboratories and centers. This place is an ideal environment for me to develop my innovative and collaborative program fully.

In the teaching and mentoring, I have engaged with students in both formal and informal environments. While at Columbia University, I taught Math and Science at Community Impact, and taught Quantum Chemistry. Recently, I have taught some lectures in Electro-magnetic Waves. Since completing my Ph.D., I have successfully mentored and supervised more than 10 undergraduate and graduate students in their

research covering from Physics to Chemistry backgrounds. My international experience working in multi-cultural environments has prepared me to cultivate a globally-connected research program, as well as teach diverse students. Besides my teaching interests listed in the teaching statement, I welcome the opportunity to teach the departmental core courses and to develop new ones for both undergraduate and graduate levels.

I look forward to discussing research opportunities, teaching program, and service at Texas Tech University with you. I strongly believe that my broad background together with my collaborative skills and insights will significantly contribute to the future development of your Department and University.

Thank you very much for your consideration, and I look forward to hearing from you.

Sincerely,

Minh Tuan Trinh, Ph.D.