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*Jesse H. and Louisa D. Sharpe Metcalf Professor of Chemistry*

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Dear Class of 2026,

On behalf of the entire Department of Chemistry, I would like to extend our heartiest congratulations on your admission to Brown University. This is a significant achievement and I want to let you know that the entire department looks forward to meeting with you when you arrive. We are particularly excited to hear of your interest in studying chemistry. Hence I would like to provide you with a brief overview of various programs in chemistry, chemical physics and biochemistry, and to invite you to contact the department if you have any additional questions.

Our curriculum is designed to prepare students for the opportunities and challenges they will encounter when contemplating the universe or daily life at the atomic and molecular level. To develop the level of understanding needed to make significant contributions to science, our students begin with a one-semester, general chemistry course, which provides an in-depth treatment of chemical structure, equilibrium, kinetics and spectroscopy. This is followed in the second semester by the first of two courses in organic chemistry. Upon completion of the organic sequence, students select either an inorganic chemistry or a bio-inorganic/bio-physical chemistry course. To help students select the right courses, each chemistry student has an advisor in the Department of Chemistry with whom to consult - from Freshman Week on.

Much of your initial studies will be carried out in W. Duncan MacMillan Hall for Undergraduate Laboratory Science. This building is designed exclusively as a teaching facility for our students to learn and to explore the intricacies of nature and chemistry. In addition to the state-of-the-art and individual work stations for each student, the introductory laboratories are equipped with a wide range of modern analytical tools including, infrared spectrometers, nuclear magnetic resonance, and gas chromatography-mass spectrometry facilities, as well as a computer network for molecular visualization, simulation, and calculations. This facility advances our efforts to provide powerful and easy-to-use methods of viewing molecules in 3D to all students in the introductory courses. These tools allow students to perform a variety of structural and electronic calculations on complicated molecules. Thus, we encourage students, early in their studies, to explore fundamental questions of chemical structure and bonding, and reactivity. This training forms the basis for more advanced courses and individual research later on.

Following the introductory semesters, chemistry concentrators are in a position to take additional courses in inorganic, physical, organic and biochemistry, as well as in related fields ranging from materials science and chemical engineering to neuroscience and molecular biology. These advanced courses are usually small and give students the chance to interact closely with faculty, graduate students and post-docs. Chemistry students may complete their undergraduate degree with an emphasis on Chemistry, Chemical Biology, Biochemistry, Chemical Physics, Computational Biology/Molecular Modeling or Materials Chemistry. Most concentrators participate in independent research in laboratories using the most advanced scientific instrumentation and facilities. Many undergraduates co-publish papers with their faculty sponsors in leading science journals while at Brown. Students and faculty agree that research is a critically important and rewarding component of the undergraduate curriculum. Throughout the four years at Brown,

students have the opportunity to study in the Humanities, Arts, and Social Sciences, and many choose to concentrate both in chemistry and in a non-science area.

Our chemistry concentrators are involved in a wide variety of activities - from sports, art and music to a range of campus and off-campus organizations. The Chemistry Department Undergraduate Group (Chem-DUG) meets monthly and is a great resource for students with interest in Chemistry.

There are currently nineteen professors affiliated with the Department of Chemistry at Brown. Their research interests encompass biochemistry, inorganic, organic, physical chemistry and chemical physics. Our specialties include material and nanoscience, DNA and protein structure and function, solid-state chemistry and catalysis, organometallic chemistry, renewable energy development, CO<sub>2</sub> fixation and utilization, the organic chemistry needed to synthesize new pharmaceuticals or understand metabolism, the development of new chemical theories and the study of chemical bonding and ultrafast reactions by advanced spectroscopic and laser techniques. Undergraduates work directly with professors, graduate students and post-doctoral fellows on projects in these fields. Some start independent projects as early as the first or second year but most find that the junior and senior years fit their plans better. We strongly encourage undergraduates to get involved with research. To learn more about research opportunities especially summer research opportunities, please visit: <http://www.brown.edu/academics/chemistry/>.

After earning their degrees, our students pursue a wide range of interests. Many go on to graduate schools in chemistry and related fields. All of our graduates who have taken this path have been awarded fellowships or assistantships, which provide both a good stipend to cover living expenses, and a full tuition scholarship to enable them to earn Ph.D.'s without expense. We are extremely proud of the placement of these students in the most competitive Ph.D. programs in the US and the world. This path leads to research careers in governmental, industrial and academic institutions and to teaching careers in colleges and universities. Some of our graduates seek employment in chemical industries directly, while others choose professional schools in environmental science, medicine, law and business. We are proud of their extraordinary success in all of these fields and we strongly encourage our graduates to remain in contact with each other after they graduate from Brown.

I hope this letter gives you a good sense of the opportunities for you in the Chemistry Department at Brown. There are many other aspects of the chemistry program, the facilities or Brown that you might be excited to learn about. Feel free to stop by the Department if you visit Brown or simply send us an email. We look forward to seeing you and we are excited to sharing our knowledge, expertise, experience and resources with you.

I understand this is an unprecedented time and the COVID-19 pandemic has brought challenges to all of us. I hope that by the fall we will put COVID-19 behind us and we will be able to welcome you to Brown in person.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lai-Sheng Wang', written in a cursive style.

Lai-Sheng Wang  
Chair, Department of Chemistry