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CHEMICAL PHYSICS GRADUATE PROGRAM



ABOUT THE CHEMICAL PHYSICS PROGRAM

Scientific research in the twenty-first century is increasingly interdisciplinary, and some of the most exciting problems are at the intersection of traditional fields. Our highly selective Ph.D. program provides graduate students with a rigorous academic foundation, unsurpassed research opportunities, and preparation for careers that require expertise in both Physics and Chemistry.

We welcome students with undergraduate degrees in Chemistry or Physics, as well as those who have majored in related fields such as Mathematics or Engineering and have strong backgrounds in Chemistry and Physics. Our students carry out Ph.D. thesis research with University of Maryland faculty drawn from numerous departments including Physics, Chemistry and Biochemistry, Mathematics, Materials Science and Engineering, and Atmospheric and Oceanic Science.

The Chemical Physics Graduate Program offers students the option of performing their thesis research at neighboring government labs such as the National Institute of Standards and Technology (NIST) or the National Institutes of Health (NIH), to name two, under the joint supervision by participating government scientists and University of Maryland faculty. Additional research opportunities are available under the auspices of the Joint Quantum Institute (JQI), and other institutes on campus.



RESEARCH AREAS

- · Atmospheric and Space Sciences
- Experimental and Theoretical Atomic, Molecular and Optical (AMO) Sciences
- Experimental and Theoretical Condensed Matter Sciences and Soft Materials
- Experimental and Theoretical Nonlinear Dynamics and Chaos
- Experimental and Theoretical Quantum Information Science and Technology
- Experimental and Theoretical Statistical Mechanics, Phase Transitions and Thermodynamics
- Nano, Meso, and Micro-Scale Science and Technologies
- Neutron Scattering and NMR
- Additional Research Choices

OUR STUDENTS

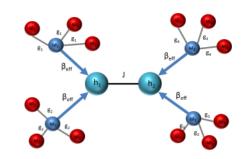
- Receive Teaching
 Assistantships or Research
 Assistantships (stipend,
 benefits, tuition remission)
- Receive the Alexander Family fellowship
- Obtain competitive national fellowships from NASA, NSF, NIST, NIH
- Publish first-author papers in top-tier scientific journals
- Have access to state-of-theart research equipment
- Enjoy social and cultural experiences in the nation's capital
- Find exciting professional positions at national research centers, universities, corporations and nonprofit organizations

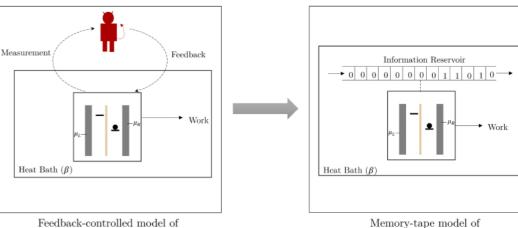
CORE COURSES

- Quantum Mechanics
- · Statistical Mechanics & Thermodynamics
- · Advanced Laboratory
- Chemical-Physics Research Rotation

Maxwell's demon in DQD

(AA Model)





Memory-tape model of Maxwell's demon in DQD