

**Committee on Identifying Opportunities at the Interface of Chemistry and Quantum
Information Science**

Information Gathering Session 2:

June 10th, 2022, 2:15 - 5:45 pm EST

2:15 Welcome and Introductions

Theodore Goodson, Committee Chair
The Richard Bernstein Collegiate Professor of Chemistry
University of Michigan

**Session I. Spectroscopic Tools and Instrumentations to Study
Chemical Approaches**

2:20 Probing Coherence in Nonlinear Molecular Spectroscopy with Quantum Light

Shaul Mukamel
Distinguished Professor of Chemistry and of Physics and Astronomy
University of California, Irvine

2:50 Q&A with Committee

Moderated by: Lawrence Cheuk
Assistant Professor of Physics
Princeton University

3:05 Spectroscopy Methods for Molecular Quantum Spin Science

Stephen Hill
Professor of Physics
Director of Electron Magnetic Resonance Users Program
Florida State University

3:35 Q&A with Committee

Moderated by: Scott Cushing
Assistant Professor of Chemistry
California Institute of Technology

3:50 Break

Session II. Biological Applications and Computational Applications for Quantum Information Science

4:00 Introduction

Theodore Goodson, Committee Chair
*The Richard Bernstein Collegiate Professor of Chemistry,
University of Michigan*

4:05 Chemical design principles for controlling quantum dynamics in complex environments: Quantum *IN* biology and Quantum *FOR* Biology

Greg Engel
*Professor of Chemistry and Molecular Engineering
University of Chicago*

4:20 Q&A with Committee

Moderated by: Eric Schelter
*Professor of Chemistry
University of Pennsylvania*

4:35 Chemical Approaches to Quantum Information Science

Danna Freedman
*F. G. Keyes Professor of Chemistry
Massachusetts Institute of Technology*

4:50 Q&A with Committee

Moderated by: Hongbin Liu
*Senior Researcher
Microsoft Quantum*

5:05 Quantum for Chemistry & Chemistry for Quantum: A Theory Perspective

Prineha Narang
*Assistant Professor
John A. Paulson School of Engineering and Applied Sciences
Harvard University*

5:20 Q&A with Committee

Moderated By: Sinead Griffin
*Staff Scientist
Lawrence Berkeley National Laboratory
Materials Sciences Division and Molecular Foundry*

5:35 Closing Remarks

Ted Goodson, Committee Chair

*The Richard Bernstein Collegiate Professor of Chemistry
University of Michigan*

5:40 Adjourn Open Session