

HARVARD UNIVERSITY  
Graduate School of Arts and Sciences



DISSERTATION ACCEPTANCE CERTIFICATE

The undersigned, appointed by the  
Department of Chemistry & Chemical Biology  
have examined a dissertation entitled:

Electronic Spectroscopy Outside of the Condon Approximation

presented by : Joseph Sean Cahill Goodknight

candidate for the degree of Doctor of Philosophy and hereby  
certify that it is worthy of acceptance.

Signature

A handwritten signature in black ink, appearing to read "A. Aspuru-Guzik", written over a horizontal line.

Typed name: Professor Alán Aspuru-Guzik

Signature

A handwritten signature in black ink, appearing to read "Dudley Herschbach", written over a horizontal line.

Typed name: Professor Dudley Herschbach

Signature

A handwritten signature in blue ink, appearing to read "Eric Heller", written over a horizontal line.

Typed name: Professor Eric Heller

Date: 17 July 2017