Carnegie Mellon University
MELLON COLLEGE OF SCIENCE

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY IN THE FIELD OF PHYSICS

TITLE: "First-Principles Study of Bismuth at Transition Metal Surfaces, Interfaces and Boron Carbide Bulk Thermodynamics"

PRESENTED BY: Qin Gao

ACCEPTED BY THE DEPARTMENT OF PHYSICS

Michael Widom 12/11/15
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Fred Gilman 12/14/15
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