





**Thermal energy transport and signal transduction of  
biomolecular machines: Molecule dynamics study of  
proteins**

(生体分子機械の熱エネルギー輸送と情報伝達:  
タンパク質の分子動力学)

**Tingting WANG**

Supervisor: Assoc. Prof. Dr. Takahisa YAMATO

2

**DISSERTATION**

Submitted in Partial Fulfilment of the Requirements for  
the Degree of Philosophy Doctor in Physics

*This page intentionally left blank.*