



Wansoo Pak &lt;wspak@vt.edu&gt;

---

## Copyright permission for the Ph.D Dissertation

---

**Journalpermissions** <journalpermissions@springernature.com>  
To: Wansoo Pak <wspak@vt.edu>

Mon, Sep 30, 2019 at 9:49 AM

Dear Wansoo Pak,

Thank you for your Springer Nature permissions query. Author retains the right to use his/her article for his/her further scientific career by including the final published journal article in other publications such as dissertations and postdoctoral qualifications provided acknowledgement is given to the original source of publication.

You do not need permission to reuse your article in a thesis/dissertation.

Best regards,

Paloma Hammond

Rights Assistant

SpringerNature

The Campus, 4 Crinan Street, London N1 9XW, United Kingdom

E [paloma.hammond@springernature.com](mailto:paloma.hammond@springernature.com)

<https://www.macmillanihe.com/>

<http://www.nature.com>

<http://www.springer.com>

<https://www.palgrave.com/gp/>

[Quoted text hidden]