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### 1.1. Chapter 1, 2 and 5

Chapter 1, 2 and 5 contains material from previously published journal articles.

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The journal article used in these chapters was previously published in the Journal of Applied Physics [A. Vora, J. Gwamuri, J. M. Pearce, P. L. Bergstrom, and D. Ö. Güney, “Multi-resonant silver nano-disk patterned thin film hydrogenated amorphous silicon solar cells for Staebler-Wronski effect compensation,” *Journal of Applied Physics*, vol. 116, no. 9, p. 093103, Sep. 2014].

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## **1.2. Chapter 1, 4 and 5**

Chapter 1, 4 and 5 contains material from previously published journal article in Scientific Reports [A. Vora, J. Gwamuri, N. Pala, A. Kulkarni, J. M. Pearce, and D. Ö. Güney, “Exchanging Ohmic Losses in Metamaterial Absorbers with Useful Optical Absorption for Photovoltaics,” *Sci. Rep.*, vol. 4, May 2014].

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### **1.3. Chapter 3 and 5**

The material contained in these chapters were previously published in Materials for Renewable and Sustainable Energy [J. Gwamuri, A. Vora, R. R. Khanal, A. B. Phillips, M. J. Heben, D. O. Guney, P. Bergstrom, A. Kulkarni, and J. M. Pearce, “Limitations of ultra-thin transparent conducting oxides for integration into plasmonic-enhanced thin-film solar photovoltaic devices,” *Mater. Renew. Sustain. Energy*, vol. 4, no. 3, pp. 1–11, Jul. 2015].

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