3M
3M Center
Saint Paul, MN 55144-1000

September 16, 2017

To Whom It May Concern,

Please find my attached application for the open "Research and Development PhD Professional" position at 3M. I expect to graduate with a Ph.D in Materials Science and Engineering in the summer of 2018, having worked with Prof. Russell Holmes at the University of Minnesota (UMN). While working on my Ph.D, I have had the privilege of touring the 3M campus and giving a poster presentation in the 3M Innovation Center, as well as attending informational sessions about 3M on the UMN campus. I have been very impressed with the spirit of collaborative innovation that 3M fosters and am excited for the opportunity to join this team. My background in research and relevant coursework has given me a breadth of experience and strong problem solving skills that I am confident I would be a valuable addition to 3M.

My graduate work on understanding kinetic processes of Organic Light-Emitting Devices (OLEDs) on multiple time scales has prepared me well to approach research problems related to materials. Through manufacturing and characterizing OLEDs, my research investigated the fundamental physics of energy transfer within these devices leading to light formation. I explored both the transient kinetics at short times, as well as degradation during the operational lifetime, developing novel experimental techniques to expose new information which enabled deeper understanding and further optimization of the underlying physics.

In addition to my experimental work, I have taken the initiative to make significant improvements in data acquisition and analysis capabilities within the laboratory. This has included designing multiplexed laboratory equipment, writing testing and control software, and integrating the collected data into a central storage database. Inspired by the high-throughput systems used in industrial research, this has allowed for seamless collection of data along with an ability to quickly compare multiple datasets across any parameter. These capabilities are changing the way that our research group is able to look at experimental trends and provides a deeper insight into data we have collected.

I know my unique multifaceted perspective and passion would be an asset to the cutting edge research team at 3M. My research in understanding device physics of OLEDs has made me a strong candidate for working on analytical research. Given my experience with designing laboratory equipment and writing data collection and analysis software, I am confident I would also be well-suited to working on projects related to high-throughput systems and data science.

I would be very excited to have the opportunity to work in the 3M environment. I look forward to speaking with you more about how I could contribute to 3M. Please contact me if you have any questions.

Sincerely,

Kyle W Hershey

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