Dear Colleagues,

The Krich group in the Department of Physics at the University of Ottawa is hiring a postdoctoral fellow for up to 2 years, performing theoretical work on plasmonic properties of intermediate band materials and novel intermediate band materials. Applications will be accepted until the position is filled, and the ideal start date is in May 2019.

The research involves a combination of analytical and numerical modelling of intermediate band materials, in close collaboration with experimental groups.

Intermediate band materials (semiconductors with a large number of allowed levels deep inside their band gaps) have only recently been created, and many of their fundamental physical properties are not understood, presenting rewarding opportunities for theoretical research. We will be exploring the plasmonic properties for their own sake and also for their influence on devices, including high efficiency solar cells and infrared photodetectors. We will also be developing models of ballistic electron motion in novel intermediate band materials.

The successful candidate will have a PhD in physics, materials science, or a related field with a strong background in the theory of solid state systems. Prior experience with intermediate band materials, plasmonics, photodetectors, or solar cells is not required. Applications from those with an experimental background are welcome, but strong interest and proficiency in analytical and numerical modelling is required. Proficiency with programming (in any language) is desirable. Postdoctoral fellows will be affiliated with the NSERC CREATE TOP-SET program, an interdisciplinary optoelectronics training program based at the University of Ottawa.

Interested applicants should send their cv and arrange for two references to be sent to Jacob Krich, jkrich@uottawa.ca.

Please forward this information to anyone who may be interested and feel free to contact Jacob with questions.

I am also seeking graduate students at either MSc or PhD level to work on this and related projects.