## Surface passivation of fluorescent SiC



## **Backgrounds:**

SiC plays important role in high power electronics due to its unique physical properties. Recently, fluorescent SiC is emerging as a promising wavelength convertor for white light-emitting diodes (LED). To enhance the extraction efficiency of white LEDs, the surface is usually roughed. However, the increased surface area after the roughness decreased the quantum efficiency of the material due to the surface recombination.

## **Objective:**

This project will test different surface passivation methods and optimize the best method, enabling f-SiC to have both high extraction efficiency and high quantum efficiency.

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