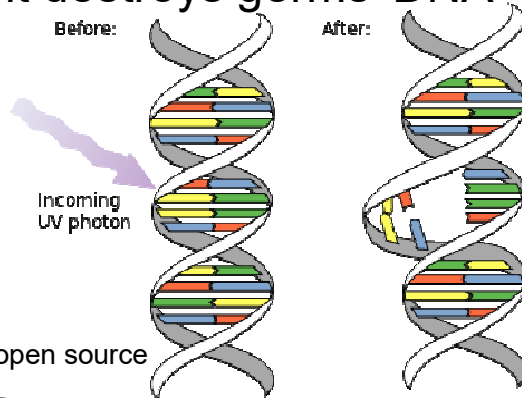


Shadow free surfaces disinfecting with UV light

Motivation

- UVC-light destroys germs' DNA



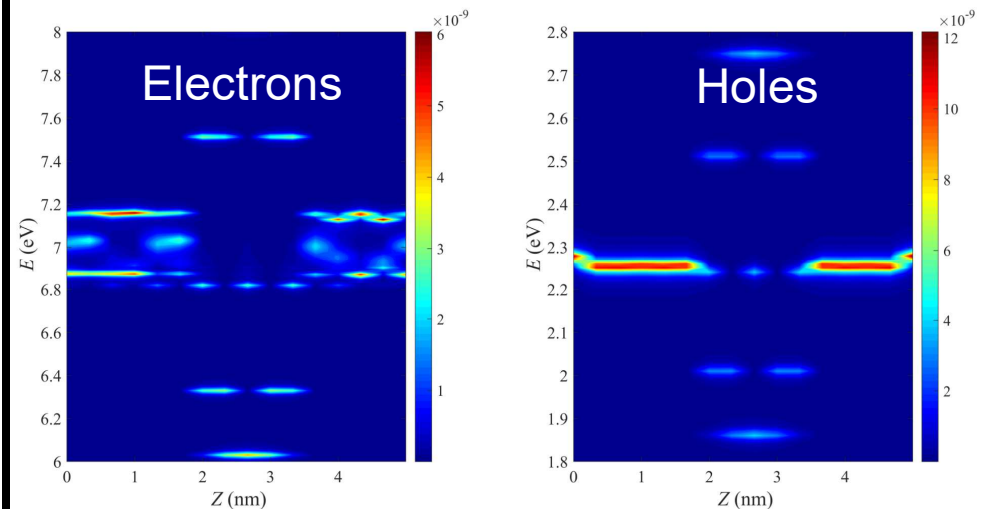
- *h*-BN LEDs:
 - Emit UVC light
 - Non-poisonous, but durable
 - 2D material – LED coating possible

Objective

- Design UVC-LEDs:
 - Define contacts, doping, material, confinement layer details

Results

- Quantum confinement shown in *h*-BN
- Direct bandgap in specific layer mixing



Approach

- DFT calculations (VASP)
- Maximally localized Wannier functions
- Transport calculations with NEMO5