

# DBR Photocathodes for EIC polarized electron source

*Thursday 19 September 2024 10:35 (25 minutes)*

The future Electron Ion Collider (EIC) will use photocathode based DC electron guns for both polarized and unpolarized electron beam generation. In this talk, the current status and recent progress of polarized photocathode research and applications at Brookhaven National Lab (BNL) will be presented. We will describe the experimental results from 300 a kV DC electron gun with DBR-SSL-GaAs photocathodes, including surface charge limit and lifetime studies.

**Primary author:** RAHMAN, Omer (Brookhaven National Lab)

**Presenter:** RAHMAN, Omer (Brookhaven National Lab)

**Session Classification:** Cathodes for polarized electron sources

**Track Classification:** Paper submitted