



US 20240213299A1

(19) **United States**

(12) **Patent Application Publication**  
**MI et al.**

(10) **Pub. No.: US 2024/0213299 A1**

(43) **Pub. Date: Jun. 27, 2024**

(54) **MONOLITHIC INTEGRATION OF  
MULTICOLOR LIGHT EMITTING DIODES**

**Publication Classification**

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(51) **Int. Cl.**  
**H01L 27/15** (2006.01)

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(52) **U.S. Cl.**  
**CPC ..... H01L 27/156 (2013.01)**

(57) **ABSTRACT**

(21) Appl. No.: **18/573,969**

(22) PCT Filed: **Jun. 24, 2022**

(86) PCT No.: **PCT/US2022/034924**

§ 371 (c)(1),

(2) Date: **Dec. 22, 2023**

**Related U.S. Application Data**

(60) Provisional application No. 63/215,130, filed on Jun.  
25, 2021.

Monolithic integration of multicolor light-emitting diodes with highly spatially uniform emission wavelength are realized in a single selective area epitaxy process. Pronounced emission peaks with very narrow spectral linewidths are also achieved. The indium contents and emission colors are tuned by precisely controlling the nanowire emitter diameter and lattice constant. The emission wavelengths exhibit small variations of only a few nanometers among individual nanowire emitters over an areal region.

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