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Zediker et al.(10) **Pub. No.: US 2023/0231357 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **SCALABLE VISIBLE BRILLOUIN FIBER LASER****Publication Classification**(71) Applicant: **Nuburu, Inc.**, Centennial, CO (US)(72) Inventors: **Mark S. Zediker**, Castle Rock, CO (US); **Adam Paricio-Moreau**, Littleton, CO (US); **Marin Iliev**, Littleton, CO (US)(73) Assignee: **Nuburu, Inc.**, Centennial, CO (US)(21) Appl. No.: **18/083,520**(22) Filed: **Dec. 17, 2022****Related U.S. Application Data**

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(57)

ABSTRACT

There are provided methods and system for providing high power, high brightness, visible laser source and laser beams. There are provided methods and systems of a direct conversion of poor beam quality visible laser light sources into a single high brightness beam in a resonant or ring laser cavity using a dual core or single core optical fiber and Stimulated Brillouin Scattering as the non-linear conversion mechanism in the graded index core of the fiber.

