



US 20220369430A1

(19) **United States**(12) **Patent Application Publication**
KOU et al.(10) **Pub. No.: US 2022/0369430 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **ANNEALING SYSTEM AND ANNEALING METHOD INTEGRATED WITH LASER AND MICROWAVE****Publication Classification**(51) **Int. Cl.****H05B 6/06** (2006.01)**H05B 6/10** (2006.01)**B23K 26/20** (2006.01)(52) **U.S. Cl.**CPC **H05B 6/06** (2013.01); **H05B 6/101** (2013.01); **B23K 26/20** (2013.01)(71) Applicants: **HIGHLIGHT TECH CORP.**, Tainan City (TW); **Finesse Technology Co., Ltd.**, Hsinchu County (TW)(72) Inventors: **CHWUNG-SHAN KOU**, Tainan City (TW); **WEN-YUNG YEH**, Tainan City (TW)(73) Assignees: **HIGHLIGHT TECH CORP.**, Tainan City (TW); **Finesse Technology Co., Ltd.**, Hsinchu County (TW)(21) Appl. No.: **17/742,446**(22) Filed: **May 12, 2022****Related U.S. Application Data**

(60) Provisional application No. 63/188,478, filed on May 14, 2021, provisional application No. 63/302,974, filed on Jan. 25, 2022.

Foreign Application Priority Data

May 5, 2022 (TW) 111117039

(57)

ABSTRACT

Disclosed is an annealing system integrated with laser and microwave. The annealing system is provided with a microwave system, a laser system, and a measurement and control system. The microwave system provides a microwave energy to a first area of a to-be-annealed object for annealing the first area of the to-be-annealed object. The laser system uses a laser to provide a laser energy to a second area of the to-be-annealed object for annealing the second area of the to-be-annealed object. The measurement and control system monitors and controls a power of a microwave and/or a laser. The annealing system is capable of reducing a time required for an overall annealing, and also capable of avoiding cracks or defects caused by large stress differences.

