

Title (en)
ULTRAFAST HIGH-TEMPERATURE SINTERING APPARATUS

Title (de)
ULTRASCHNELLE HOCHTEMPERATURSINTERVORRICHTUNG

Title (fr)
APPAREIL DE FRITTAGE ULTRARAPIDE À HAUTE TEMPÉRATURE

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EP 4350018 A1 20240410 (EN)

Application
EP 22200017 A 20221006

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Abstract (en)
The present invention relates to a sintering apparatus comprising a first and a second carbon-comprising thermally conductive substrate arranged at a distance from each other, thereby providing a space for receiving a substrate to be sintered, and provided between a third and a fourth thermally conductive substrate; and heating means for heating the third and/or the fourth thermally conductive substrate at a heating rate of at least 50 °C/s to a temperature between 750 °C and 1400 °C, thereby heating the first and/or the second thermally conductive substrate, respectively, wherein the third and the fourth thermally conductive substrate comprise, independently from one another, one or more metal nitride and/or metal oxide.

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Citation (applicant)
WO 2020236767 A1 20201126 - UNIV MARYLAND [US]

Citation (search report)
• [X] CN 208567515 U 20190301 - HENAN YALIAN NEW MAT CO LTD
• [X] US 2007202455 A1 20070830 - SAIJO TAKAMITSU [JP], et al
• [A] US 2020350186 A1 20201105 - LAL ANNENDRA [US], et al
• [A] WO 03095688 A2 20031120 - HARMONICS INC [US]

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