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(19) **United States**(12) **Patent Application Publication**
König(10) **Pub. No.: US 2023/0231365 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **SPARK PLUG ELECTRODE AND METHOD
OF MANUFACTURING THE SAME**(52) **U.S. Cl.**CPC *H01T 13/16* (2013.01); *H01T 21/02*
(2013.01); *H01T 13/39* (2013.01)(71) Applicant: **FEDERAL-MOGUL IGNITION
GMBH**, Neuhaus-Schierschnitz (DE)(72) Inventor: **Daniel König**, Rodental (DE)

(57)

ABSTRACT(21) Appl. No.: **18/116,544**(22) Filed: **Mar. 2, 2023****Related U.S. Application Data**(63) Continuation of application No. 17/576,566, filed on
Jan. 14, 2022, now Pat. No. 11,621,544.**Publication Classification**(51) **Int. Cl.***H01T 13/16* (2006.01)*H01T 21/02* (2006.01)*H01T 13/39* (2006.01)

A spark plug electrode with an electrode tip formed on an electrode base using an additive manufacturing process, such as a powder bed fusion technique. The spark plug electrode includes an electrode base that at least partially surrounds a heat dissipating core, an electrode tip that is formed on the electrode base and includes a precious metal-based material, and a thermal coupling zone that directly thermally couples the electrode tip to the heat dissipating core. In some examples, the electrode tip is formed on an electrode base that has been cut or severed to expose a portion of the heat dissipating core, such that the electrode tip is formed directly on the heat dissipating core using additive manufacturing.

