



US009410452B2

(12) **United States Patent**  
**Hirson et al.**

(10) **Patent No.:** **US 9,410,452 B2**  
(45) **Date of Patent:** **\*Aug. 9, 2016**

(54) **FUEL GENERATION USING HIGH-VOLTAGE ELECTRIC FIELDS METHODS**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/426,083**

(22) PCT Filed: **Sep. 5, 2013**

(86) PCT No.: **PCT/US2013/058301**

§ 371 (c)(1),

(2) Date: **Mar. 4, 2015**

(87) PCT Pub. No.: **WO2014/039704**

PCT Pub. Date: **Mar. 13, 2014**

(65) **Prior Publication Data**

US 2015/0259615 A1 Sep. 17, 2015

**Related U.S. Application Data**

(60) Provisional application No. 61/697,148, filed on Sep. 5, 2012.

(51) **Int. Cl.**

**C07C 27/00** (2006.01)  
**F01K 25/06** (2006.01)  
**B01J 12/00** (2006.01)  
**C01B 3/04** (2006.01)  
**B01D 21/00** (2006.01)  
**B01D 21/01** (2006.01)  
**B09B 3/00** (2006.01)  
**H05H 1/42** (2006.01)  
**H05H 1/44** (2006.01)  
**C01B 3/12** (2006.01)  
**C07C 1/04** (2006.01)  
**C10G 2/00** (2006.01)  
**B01J 19/08** (2006.01)

(Continued)

(52) **U.S. Cl.**

CPC ..... **F01K 25/06** (2013.01); **B01D 21/0009** (2013.01); **B01D 21/01** (2013.01); **B01J 12/002** (2013.01); **B01J 19/088** (2013.01); **B09B 3/005** (2013.01); **C01B 3/02** (2013.01); **C01B 3/042** (2013.01); **C01B 3/12** (2013.01); **C07C 1/04**

(2013.01); **C10G 2/32** (2013.01); **C10L 1/06** (2013.01); **C10L 1/08** (2013.01); **F02C 1/05** (2013.01); **H05H 1/34** (2013.01); **H05H 1/42** (2013.01); **H05H 1/44** (2013.01); **B01J 2219/0809** (2013.01); **B01J 2219/0815** (2013.01); **B01J 2219/0875** (2013.01); **B01J 2219/0877** (2013.01); **B01J 2219/0898** (2013.01); **C01B 2203/062** (2013.01); **C01B 2203/0861** (2013.01); **C10L 2200/043** (2013.01); **C10L 2200/0415** (2013.01); **C10L 2200/0423** (2013.01); **C10L 2200/0446** (2013.01); **C10L 2290/38** (2013.01); **C10L 2290/42** (2013.01); **Y02E 50/32** (2013.01); **Y02E 60/364** (2013.01); **Y02P 20/13** (2015.11)

(58) **Field of Classification Search**

CPC ..... **B01J 12/002**; **B01J 2219/0898**; **B01J 2219/0877**; **B01J 2219/0875**; **B01J 2219/0815**; **B01J 2219/0809**; **C01B 2203/062**; **C01B 3/02**; **Y02E 60/364**; **C10L 2290/42**; **C10L 2290/38**  
USPC ..... **252/373**; **48/197**  
See application file for complete search history.

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(57) **ABSTRACT**

Methods of making fuel are described herein. A method may include providing a first working fluid, a second working fluid, and a third working fluid. The method may further include exposing the first working fluid to a first high-voltage electric field to produce a first plasma, exposing the second working fluid to a second high-voltage electric field to produce a second plasma, and exposing the third working fluid to a third high-voltage electric field to produce a third plasma. The method may also include contacting the third plasma, the second plasma, and the first plasma to form a plasma mixture, cooling the plasma mixture using a heat exchange device to form a cooled plasma mixture, and contacting the cooled plasma mixture with a catalyst to form a fuel fluid.

**25 Claims, 5 Drawing Sheets**