



US008262868B2

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

(10) **Patent No.:** **US 8,262,868 B2**  
(45) **Date of Patent:** **Sep. 11, 2012**

(54) **SPECTRAL CHEMISTRY**

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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 447 days.

(21) Appl. No.: **10/203,797**

(22) PCT Filed: **Sep. 11, 2001**

(86) PCT No.: **PCT/US01/28392**

§ 371 (c)(1),  
(2), (4) Date: **Nov. 27, 2002**

(87) PCT Pub. No.: **WO02/22797**

PCT Pub. Date: **Mar. 21, 2002**

(65) **Prior Publication Data**

US 2004/0089532 A1 May 13, 2004

**Related U.S. Application Data**

(60) Continuation-in-part of application No. 09/919,679, filed on Aug. 1, 2001, now abandoned, which is a continuation of application No. 09/460,025, filed on Dec. 13, 1999, now abandoned, which is a division of application No. 09/098,883, filed on Jun. 17, 1998, now Pat. No. 6,033,531.

(60) Provisional application No. 60/231,620, filed on Sep. 11, 2000, provisional application No. 60/049,910, filed on Jun. 18, 1997.

(51) **Int. Cl.**  
**C07C 1/00** (2006.01)

(52) **U.S. Cl.** ..... 204/157.15; 204/157.21; 204/157.4

(58) **Field of Classification Search** ..... 435/173.1;  
204/157.15, 157.21, 157.4

See application file for complete search history.

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(57) **ABSTRACT**

The invention relates to controlling the formation of water in a reaction system comprising hydrogen, oxygen and atomic hydrogen by irradiating the reaction system with electromagnetic emissions from a platinum lamp such that the atomic hydrogen is direct resonance targeted. Physical platinum may also be present in the reaction system.

**20 Claims, 44 Drawing Sheets**