



US006627048B1

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

(10) **Patent No.:** **US 6,627,048 B1**  
(45) **Date of Patent:** **Sep. 30, 2003**

(54) **REDUCTIVE PRECIPITATION OF METALS  
PHOTOSENSITIZED BY TIN AND  
ANTIMONY PORPHYRINS**

(75) Inventors: **John A. Shelnutt**, Tijeras, NM (US);  
**Weiliang Gong**, Albuquerque, NM  
(US); **Abdesselam Abdelouas**, Nantes  
(FR); **Werner Lutze**, Albuquerque, NM  
(US)

(73) Assignee: **Sandia Corporation**, Albuquerque, NM  
(US)

(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 179 days.

(21) Appl. No.: **09/846,593**

(22) Filed: **Apr. 30, 2001**

(51) **Int. Cl.**<sup>7</sup> ..... **C07C 1/00**

(52) **U.S. Cl.** ..... **204/157.75; 204/157.4**

(58) **Field of Search** ..... **204/157.4, 157.75**

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*Primary Examiner*—Edna Wong

(74) *Attorney, Agent, or Firm*—Elmer A. Klavetter

(57) **ABSTRACT**

A method for reducing metals using a tin or antimony  
porphyrin by forming an aqueous solution of a tin or  
antimony porphyrin, an electron donor, such as  
ethylenediaminetetraacetic acid, triethylamine,  
triethanolamine, and sodium nitrite, and at least one metal  
compound selected from a uranium-containing compound, a  
mercury-containing compound, a copper-containing  
compound, a lead-containing compound, a gold-containing  
compound, a silver-containing compound, and a platinum-  
containing compound through irradiating the aqueous solu-  
tion with light.

**16 Claims, 2 Drawing Sheets**

