

(19) World Intellectual Property Organization
International Bureau



G00002



(43) International Publication Date
12 September 2002 (12.09.2002)

PCT

(10) International Publication Number
WO 02/071517 A1

(51) International Patent Classification⁷: **H01M 4/90**,
4/58, 8/04, 8/18, 12/08

(21) International Application Number: PCT/US02/06106

(22) International Filing Date: 28 February 2002 (28.02.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/797,332 1 March 2001 (01.03.2001) US

(71) Applicant: **ENERGY CONVERSION DEVICES, INC.**
[US/US]; 2956 Waterview Drive, Rochester Hills, MI
48309 (US).

(72) Inventors: **OVSHINSKY, Stanford, R.**; 2700 Squirrel
Road, Bloomfield Hills, MI 48304 (US). **ALADJOV,**

Boyko; 1415 Briars Way, Rochester Hills, MI 48307
(US). **VENKATESAN, Srinivasan**; 30115 Woodgate
Drive, Southfield, MI 48076 (US). **DHAR, Subhash, K.**;
1978 Long Lake Shores, Bloomfield Hills, MI 48302 (US).

(74) Agents: **SCHUMAKER, David, W.** et al.; Energy Con-
version Devices, Inc., 2956 Waterview Drive, Rochester
Hills, MI 48309 (US).

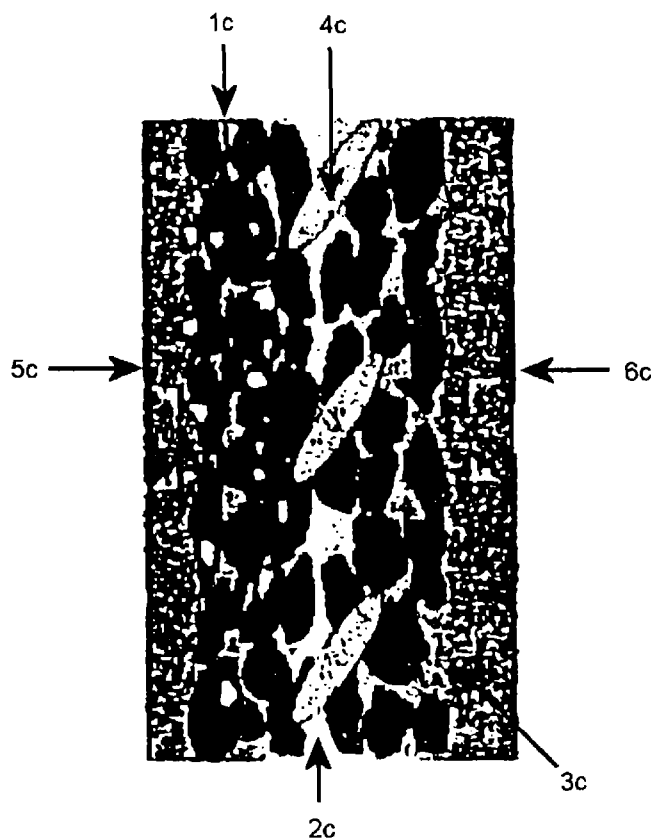
(81) Designated States (*national*): AU, BR, CA, CN, IN, JP,
KR, MX, NO, RU, SG, UA.

(84) Designated States (*regional*): European patent (AT, BE,
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
NL, PT, SE, TR).

Published:
— with international search report

[Continued on next page]

(54) Title: NOVEL FUEL CELL CATHODES AND THEIR FUEL CELLS



(57) Abstract: Fuel cell cathodes (1c) and instant startup fuel cells (7) employing the cathode(1c). The cathodes (1c) operate through the mechanism of redox couples which uniquely provide multiple degrees of freedom in selecting the operating voltages available for such fuel cells (7). Such cathodes(1c) provide the fuel cells (7) in which they are used a "buffer" or "charge" of oxidizer available within the cathode at all times.



162162

WO 02/071517 A1

WO 02/071517 A1

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.