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Declaration under Rule 4.17:

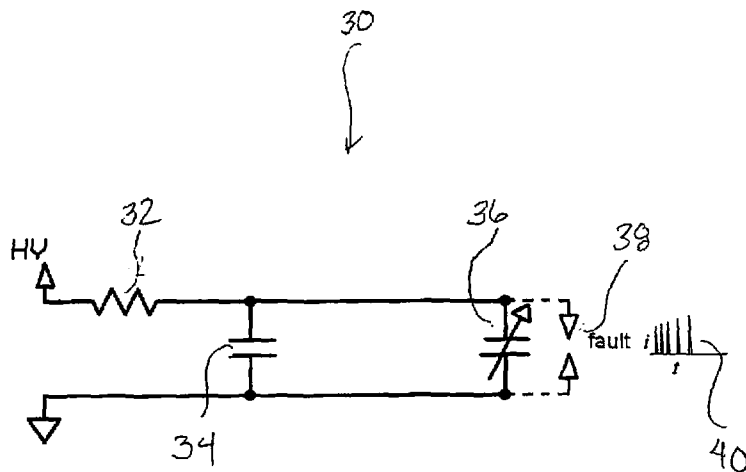
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

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(54) Title: FAULT-TOLERANT MATERIALS AND METHODS OF FABRICATING THE SAME



(57) Abstract: Compliant/stretchable electroactive materials which exhibit self-healing/clearing properties are disclosed.

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/87485

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H01G 4/015; H01L 21/20 (2008.01)

USPC - 361/273; 438/396

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8): H01G 4/015; H01L 21/20 (2008.01);

USPC: 361/273; 438/396

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
USPC: 361/271, 272, 273, 275.1, 301.4, 305, 306.3; 438/381-399; 257/303, 595 (keyword limited -- see keywords below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (PGPB,USPT,EPAB,JPAB); GOOGLE SCHOLAR:

Search Terms: EAP, electroactive polymer, capacitor, self-healing, self-protected, self-clearing, recover, nanoparticle, nanotube, fiber, stretch, Mpa, elastomer, modulus, polyaniline, power, current, voltage, limit, spot-knock, resistor, pulse, electrode, microsecond

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 7,099,141 B1 (KAUFMAN et al.) 29 August 2006 (29.08.2006), entire document; Abstract; col 4, ln 38-40; Fig 2; col 6, ln 44-55; col 4, ln 40-52; col 6, ln 44-59; col 2, ln 54-56; col 7, ln 27.	1-28
Y	US 2005/0157893 A1 (PELRINE et al.) 21 July 2005 (21.07.2005), entire document; Abstract; para [0056]-[0057]; Fig 1A; para [0062]-[0064]; para [0007]; para [0043]; Fig 1D; para [0086]; Fig 2C; para [0054]; para [0109].	1-28
Y	US 4,433,359 A (HAMABE et al.) 21 February 1984 (21.02.1984), entire document; Abstract; col 8, ln 29-30; col 3, ln 40-47; col 4, ln 55-56; col 4, ln 54-58; col 4, ln 62.	7, 27-28
Y	US 6,136,176 A (WHEELER et al.) 24 October 2000 (24.10.2000), entire document; Abstract; col 3, ln 50-56; col 2, ln 26-31.	11
Y	US 4,326,762 A (HOCKENBROCK et al.) 27 April 1982 (27.04.1982), entire document; Abstract; col 6, ln 25-28; Fig 3; col 3, ln 44-45; col 9, ln 37-39.	19-20, 22-24, 26
Y	US 2006/0090762 A1 (HEGDE et al.) 04 May 2006 (04.05.2006), entire document; Abstract; para [0071]; Fig 1; para [0021].	24

 Further documents are listed in the continuation of Box C.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

18 April 2008 (18.04.2008)

Date of mailing of the international search report

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