Title (en)

Article comprising improved noble metal-based alloys and method for making the same

Title (de)

Artikel mit verbesserten Edelmetallbasislegierungen und Herstellungsverfahren

Title (fr)

Article avec un alliage à base de métaux nobles amelioré et méthode de production

Publication

EP 1096523 A2 20010502 (EN)

Application

EP 00309103 A 20001016

Priority

- US 16129099 P 19991025
- US 16129199 P 19991025
- US 48462700 A 20000118

Abstract (en)

A device having electrical contacts formed from an alloy having improved wear resistance is provided, the alloy being particularly useful in microrelay devices formed by MEMS technology. In one embodiment, the alloys are chosen to allow sufficient precipitation hardening to improve wear resistance, but keep precipitation below a level that would unacceptably reduce electrical conductivity. This is achieved by using alloying materials that have very limited or no solid solubility in the noble metal matrix, e.g., less than 4 wt.% solid solubility. In a second embodiment, an alloy contains a noble metal matrix and insoluble, dispersoid particles having no solubility in the matrix, these dispersoid particles offering a similar strengthening mechanism. <IMAGE>

IPC 1-7 (main, further and additional classification)

H01H 1/02

IPC 8 full level (invention and additional information)

C22F 1/14 (2006.01); **C22C 5/00** (2006.01); **C22C 5/02** (2006.01); **C22C 5/04** (2006.01); **C22C 5/06** (2006.01); **C22F 1/00** (2006.01); **H01H 1/023** (2006.01); H01H 1/00 (2006.01); H01H 1/027 (2006.01)

CPC (invention and additional information)

H01H 1/023 (2013.01); H01H 1/0036 (2013.01); H01H 1/027 (2013.01); H01H 2300/036 (2013.01)

Cited by

EP1320111A1; FR2930370A1; DE102006027821A1; US7294028B2; US7244367B2; WO03053843A3; WO2012076281A1; WO2007118337A1; WO2004032166A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

EPO simple patent family

EP 1096523 A2 20010502; EP 1096523 A3 20030618; CA 2322714 A1 20010425; JP 2001158926 A 20010612; KR 20010040170 A 20010515; US 2001008157 A1 20010719

INPADOC legal status

2004-09-15 [18D] APPLICATION DEEMED TO BE WITHDRAWN
- Effective date : 20031219

2004-04-15 [REG DE 8566] DESIGNATED COUNTRY DE NOT LONGER VALID

2004-03-10 [AKX] PAYMENT OF DESIGNATION FEES

2003-06-18 [AK] DESIGNATED CONTRACTING STATES:
- Designated State(s) : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

2003-06-18 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Countries : AL LT LV MK RO SI

2001-05-02 [AK] DESIGNATED CONTRACTING STATES:
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2001-05-02 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Free text : AL;LT;LV;MK;RO;SI