

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 April 2008 (24.04.2008)

PCT

(10) International Publication Number
WO 2008/048554 A8

- (51) International Patent Classification:
C08G 59/00 (2006.01) *H05K 3/30* (2006.01)
- (21) International Application Number:
PCT/US2007/022002
- (22) International Filing Date: 15 October 2007 (15.10.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11/581,302 16 October 2006 (16.10.2006) US
- (71) Applicant (for all designated States except US): **TRILION SCIENCE, INC.** [—/US]; 6503 Dumbarton Circle, Fremont, CA 94555 (US).
- (72) Inventors: **XU, Qianfei**; 49 Showers Drive, Apt. A134, Mountain View CA 94040 (US). **HOU, Chung-Jen**; 2258 Oxford Drive, Pensacola, FL 32503 (US). **LIANG, Rongchang**; 875 Brent Drive, Cupertino, CA 95014 (US).
- (74) Agent: **SEVERIN, Larry, E.**; 1301 Dove Street No. 1050, Newport Beach, CA 92660 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

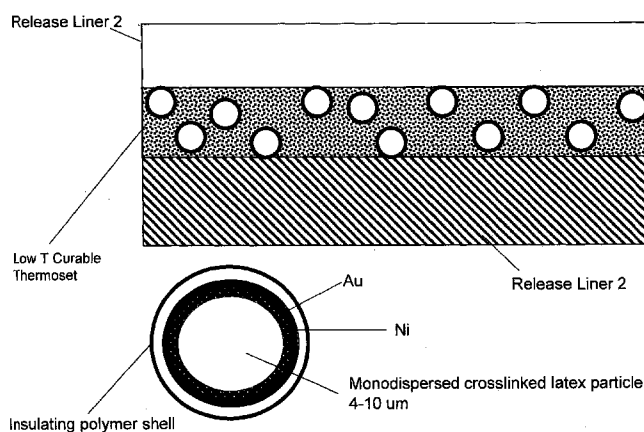
Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: IMPROVED EPOXY COMPOSITIONS

Figure 1A Anisotropic Conductive Film (ACF)



(57) Abstract: An epoxy composition for applications such as one-part adhesives, coatings, prepreg and molding compounds that includes leuco dyes, particularly those comprising a N,N-dialkylamino-, N,N-diarylamino-, or cycloalkylamino- functional group on one of the aromatic rings, as a co-catalyst or co-curing agent. The use of the leuco dye co-catalyst provides improved curing speed of the epoxy composition comprising a latent curing agent/catalyst such as Novacure imidazole microcapsules while maintaining the shelf-life stability. The epoxy may also include a secondary co-catalyst that includes amides and lactams, particularly those comprising a N,N-dialkylamino-, N, N- diarylamino-, or cycloalkylamino- functional group. The improved epoxy composition is implemented as adhesives for manufacturing an anisotropic conductive film and also for connecting, encapsulating, or packaging of electronic devices.

WO 2008/048554 A8



Published:

— *with international search report*

(48) Date of publication of this corrected version:

28 May 2009

(88) Date of publication of the international search report:

12 June 2008

(15) Information about Correction:

see Notice of 28 May 2009