

[SS 12] glass and absorb and (dye or band) and (plastic or polymer)

Results in EPODOC 23

[SS 13] 12 and (layer or laminate or surface)

Results in EPODOC 12

[SS 14] ..li



1/12 © EPODOC / EPO

PN - [CN107487096](#) A 20171219

PR - CN20171648719 20170801

AP - CN20171648719 20170801

DT - I

CNOI - [B41M1/30](#) ; [B41M5/0011](#) ; [B41M7/0018](#) ; [D06P1/46](#) ; [D06P1/922](#)

PA - JIESHOU HONGLI PLASTIC CO LTD

TI - **Plastic** product **surface** abrasion-resistant printing process

AB - A **plastic** product **surface** abrasion-resistant printing process comprises pretreatment, printing treatment and aftertreatment. During printing treatment, the water absorption capability of **plastic** products is poor, but the **plastic** products can **absorb** lots of cyclohexane in low-concentration **dye** liquor with cyclohexane as a solvent, internal structures are swelled, and pores become larger; the **plastic** products are put into high-concentration **dye** liquor at the moment, cyclohexane is evaporated at the temperature due to the fact that cyclohexane is insoluble in water, the high-concentration **dye** liquor with water as a solvent completely penetrates into the swelled large pores, meanwhile, **glass** transition of the **plastic** products takes place, the pores in poly chiffon reach the maximum at the moment, and thus the printing rate is increased; and during aftertreatment, the flexibility and antistatic property of the **plastic** products are improved through a softening agent, and the **dye** fastness, especially the fastness to washing, is improved through a color fixing agent.

2/12 © EPODOC / EPO

PN - [CN107354780](#) A 20171117

PR - CN20171647692 20170801

AP - CN20171647692 20170801

DT - I

CNOI - [D06P5/02](#) ; [D06P1/81](#)

PA - JIESHOU HONGLI PLASTIC CO LTD

TI - **Surface** dyeing process for **plastic** products

AB - A **surface** dyeing process for **plastic** products comprises pretreatment, dyeing treatment and aftertreatment. In dyeing treatment, **plastic** products with poor water absorption performance can **absorb** a large amount of cyclohexane in low-concentration **dye** liquor

with cyclohexane as a solvent, so that the internal structure are swollen, the porosity becomes larger, then the **plastic** products are put into high-concentration **dye** liquor, cyclohexane is evaporated at the temperature due to water insolubility, the high-concentration **dye** liquor with water as a solvent completely permeates into the swollen large pores, the **plastic** products are subjected to **glass** transition, at the moment, pores in polyester chiffon reach the maximum, and the dyeing rate is increased; in aftertreatment, the softness and the anti-static property of the **plastic** products are improved through a softening agent, and the **dye** firmness, especially the fastness to washing is improved through a **dye**-fixing agent.

3/12 © EPODOC / EPO

- PN - [CN203595879U](#) U 20140514
- PR - CN20132631473U 20131012
- AP - CN20132631473U 20131012
- DT - I
- PA - JIANGMEN YIDU SEMICONDUCTOR CO LTD
- TI - High-contrast black film LCD screen with **dye** liquid crystals
- AB - The utility model discloses a high-contrast black film LCD screen with **dye** liquid crystals. The LCD screen comprises an upper **glass** substrate and a lower **glass** substrate. A black film, an upper ITO conductive **layer**, an upper PI alignment **layer**, a liquid crystal **layer**, a lower PI alignment **layer** and a lower ITO conductive **layer** are arranged between the upper **glass** substrate and the lower **glass** substrate from the top to the bottom. The liquid crystal **layer** is provided with **plastic** balls for separation and is filled with **dye** liquid crystals. Edge sealing glue is used between the upper **glass** substrate and the lower **glass** substrate for sealing. The LCD screen uses the **dye** liquid crystals to substitute common liquid crystals of conventional LCD screens. As the **dye** liquid crystals can **absorb** light, blackness of the bottom color of the LCD screen is increased, light transmission is prevented in non-display areas, and the contrast and the view angle are increased.

4/12 © EPODOC / EPO

- PN - [CN102306707](#) A 20120104
- PR - CN20111237300 20110818
- AP - CN20111237300 20110818
- DT - I
- CT - || STSE (A)
[CN102017147](#) A 20110413 [Y] (INVISAGE TECHNOLOGIES INC)
[Y] 1-10
* 说明书第104-105段, 第316段、329段, 附图2e, 附图3、3a *;
[CN101559919](#) A 20091021 [A] (UNIV SHANGHAI [CN])
[A] 1-10
* 全文 *;
[CN102142317](#) A 20110803 [A] (UNIV TIANJIN NORMAL)
[A] 1-10
* 全文 *
- CTNP - || STSE (A)

[Y] Chun Xian Guo等, "Layered Graphene/Quantum Dots for Photovoltaic Devices",
《Angewandte Chemie International Edition》, (20100412), vol. 49, no. 17, pages 3014 - 3017,

[Y] 1-10

* 第3014-3017页 *

[A] Liming Dai, "Layered Graphene/Quantum Dots: Nanoassemblies for Highly Efficient Solar Cells", 《ChemSusChem》, (20100528), vol. 3, no. 7, pages 797 - 799,

[A] 1-10

* 第797-799页 *

- CCA - [Y02E10/549](#) ; [Y02P70/521](#)
- PA - BEIJING INST TECHNOLOGY
- TI - Photoelectric detector based on colloidal quantum dots and graphene utilized as photoelectrode and manufacturing method thereof
- AB - The invention relates to a photoelectric detector based on colloidal quantum dots and grapheme utilized as a photoelectrode and a manufacturing method thereof and belongs to the fields of photoelectric conversion, new energy materials and technologies. The method comprises the following steps: preparing a graphene film on a clean ITO (indium tin oxide) **glass surface** by an electrophoresis method, and then preparing a **layer** of colloidal quantum-dot film on the graphene film; spinning an organic **polymer** active **layer** on the photoelectrode; and finally evaporating the photoelectrode to obtain a photoelectric detector. The method for manufacturing the structure of the photoelectric detector provided by the invention is simple and low-priced; spectral bands induced by the detector can be adjusted according to the compositions of the polymers and the spectral **band** range of the incident sunlight absorbed by the polymers; PbS colloidal quantum dots with different particle sizes can **absorb** near-infrared light with different wavelengths and different near-infrared spectrums in the incident sunlight can be absorbed by the photoelectric detector with the colloidal quantum dots; and the quantum dots dotted on the graphene film can interact with the graphene, so that photon-generated carriers can be effectively separated and rapidly transmitted, and the photoelectric detection sensitivity is improved.

5/12 © EPODOC / EPO

PN - [CN102199769](#) A 20110928

PNFP - CN102199769B B 20130619

PR - CN20111120822 20110511

AP - CN20111120822 20110511

DT - I

CT - || STSE (A)
[CN101225456](#) A 20080723 [] (JIANGSU HONGDA SPECIAL STEEL S [CN]);
[US4810525](#) A 19890307 [] (MORITA TAKESHI [JP], et al)

CTNP - || STSE (A)
[] - 《强激光与粒子束》 20100831 周磊等 LY2铝合金激光冲击处理工艺 第1780-1784页 1-6 第22卷第8期

CCI - [C23C14/28](#) ; [C23C24/082](#) ; [H05K999/99](#)

CQI - [B05D3/148](#)

PA - (A B)
UNIV JIANGSU; UNIV PLA AIR FORCE ENGINEERING

TI - (A B)
Method and apparatus for acquiring nano-coating by utilizing shock waves generated by laser-induced continuous detonation

AB - (A)
The invention relates to a method and apparatus for acquiring a nano-coating on the **surface** of a metal by utilizing strong shock waves generated by laser-induced plasma continuous detonation, relating to the technical fields of laser and **surface** reinforcement. The laser excited by a laser provided by the invention irradiates black paint particles on the upper port of a high-pressure-resistant **glass** pipeline, the black paint particles **absorb** laser energy and instantaneously vaporize, break down and ionize to generate plasmas, the plasmas are subjected to sequent laser irradiation to rapidly accumulate energy and cause expansion and explosion, thus forming initial plasma detonation shock waves, and the initial plasma detonation shock waves propagate in the high-pressure-resistant **glass** pipeline; and high-temperature high-energy plasmas repeatedly expand and explode along a black paint **band**, and the pressure of the shock waves obviously zooms while reaching the lower port, thus embedding nanoparticles to the surfaces of an alloy material so as to form a nanoparticle coating. Strong **plastic** strain and large-density dislocation happen on a **surface layer**, and large residual compressive stress generates on the **surface layer**, thus improving anti-fatigue performance of the material.

6/12 © EPODOC / EPO

PN - [CN101285905](#) A 20081015

PNFP - CN101285905B B 20100602

PR - CN2007148838 20070410

AP - CN2007148838 20070410

DT - I

PA - (A)
GUOGONG GAN [CN]
- (B)
GUOGONG GAN

TI - (A B)
Filters possessing **dye** resin **layer** for absorbing yellow characteristic light and display employing same

AB - (A)
The invention provides an optical filter for a **dye** resin **layer**, which has the function of absorbing yellow characteristic light. The optical filter comprises a **glass** substrate or a transparent resin substrate; one **surface** of the substrate is plated with a conductive film module which can reduce reflection and increase transmission; the conductive film module which can reduce reflection and increase transmission consists of film layers, low-refractivity transparent metal oxide film layers Mel and five-**layer** films with Meh/Mel/silver or silver alloy/Mel/Meh, wherein the film layers take silver or silver alloy as a conductive base; the low-refractivity transparent metal oxide film layers Mel are symmetrically arranged on two sides of the film layers taking the silver or the silver

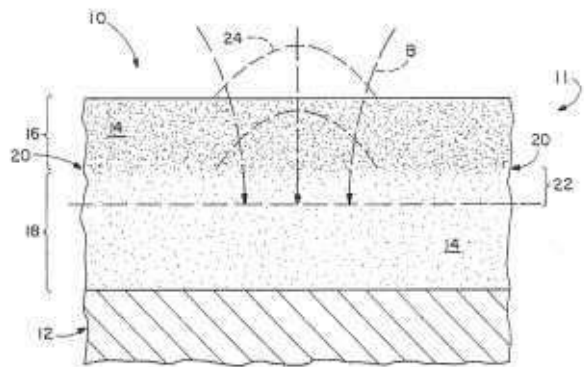
alloy as the conductive base; and the five-layer films with Meh/Mel/silver or silver alloy/Mel/Meh are formed by high-refractivity transparent metal oxide film layers Meh which are symmetrically arranged two sides of the low-refractivity transparent metal oxide film layers. The optical filter is provided with **dye** and the **dye resin layer**, wherein the **dye** can absorb 596 nm of the yellow characteristic light from neon of a plasma panel display; the **dye resin layer** is formed by mixing the **dye** and resin; and at least one **layer** of resin **layer** or one **layer** of plastic film **layer** is arranged between the **dye resin layer** and a film plating **layer**, or the **glass** substrate or the transparent resin substrate is used to separate the **dye resin layer** from the film plating **layer**. The optical filter has the advantages of great cost reduction, high production efficiency and high transmission.

- (B)

The invention provides an optical filter for a **dye resin layer**, which has the function of absorbing yellow characteristic light. The optical filter comprises a **glass** substrate or a transparent resin substrate; one **surface** of the substrate is plated with a conductive film module which can reduce reflection and increase transmission; the conductive film module which can reduce reflection and increase transmission consists of film layers, low-refractivity transparent metal oxide film layers Mel and five-layer films with Meh/Mel/silver or silver alloy/Mel/Meh, wherein the film layers take silver or silver alloy as a conductive base; the low-refractivity transparent metal oxide film layers Mel are symmetrically arranged on two sides of the film layers taking the silver or the silver alloy as the conductive base; and the five-layer films with Meh/Mel/silver or silver alloy/Mel/Meh are formed by high-refractivity transparent metal oxide film layers Meh which are symmetrically arranged two sides of the low-refractivity transparent metal oxide film layers. The optical filter is provided with **dye** and the **dye resin layer**, wherein the **dye** can absorb 596 nm of the yellow characteristic light from neon of a plasma panel display; the **dye resin layer** is formed by mixing the **dye** and resin; and at least one **layer** of resin **layer** or one **layer** of plastic film **layer** is arranged between the **dye resin layer** and a film plating **layer**, or the **glass** substrate or the transparent resin substrate is used to separate the **dye resin layer** from the film plating **layer**. The optical filter has the advantages of great cost reduction, high production efficiency and high transmission.

7/12 © EPODOC / EPO

PN - [US4901304](#) A 19900213
 PR - US19860916609 19861008
 AP - US19860916609 19861008
 DT - **
 CT - [US4264986](#) A []; [US4278734](#) A [];
[US4285056](#) A []; [US4300227](#) A [];
[US4336545](#) A []; [US4398203](#) A [];
[US4404656](#) A []; [US4430659](#) A [];
[US4527173](#) A []; [US4577291](#) A [];



	US4578788 A []; US4651172 A []; US4719615 A []; US4780867 A []; EP0136070 A1 []
CCI	- G11B7/24
CCA	- Y10S430/146
PA	- OPTICAL DATA INC [US]
TI	- Erasable optical data storage medium having a zoned integral recording layer
AB	- An erasable optical data storage medium has an integral recording layer including an expansion zone and a retention zone having different optical and thermal-mechanical properties. A uniform integral layer of dyed polymer material has the dye leached out of the surface region and a second dye diffused into the surface region to create a retention zone. The retention zone has a higher elastic modulus and glass transition temperature than the underlying expansion zone and is adapted to absorb and transmit light which is centered about a different wavelength than the expansion zone. The medium is adapted to be used with a non-ablative and non-vesicular method to create and erase optically detectable deformations in the retention zone.

8/12 © EPODOC / EPO

PN	- KR20040049280 A 20040611
PNFP	- KR100714734B B1 20070507
PR	- JP20020354418 20021205
AP	- KR20030087730 20031204
DT	- I
PA	- (A)

NIPPON CATALYTIC CHEM IND

- TI - (A)
PRESSURE-SENSITIVE ADHESIVE COMPOSITION USING NEAR INFRARED RAY-
ABSORBING **DYE** FOR ADHESION OF FILM MATERIALS FORMING PLASMA DISPLAY
- (B1)
PRESSURE-SENSITIVE ADHESIVE COMPOSITION
- AB - (A)
PURPOSE: Provided is a pressure sensitive adhesive composition, which includes a near IR-absorbing **dye** that is low in degradation caused by UV, is useful for forming an adhesive **layer** for film materials forming plasma display, can **absorb** near IR as well as UV, and has a color tone-adjusting function. CONSTITUTION: The pressure sensitive adhesive composition comprises: (A) a pressure sensitive adhesive **polymer**; (B) a near IR-absorbing **dye**; (C) a UV-absorbing agent and/or (D) a hindered amine light stabilizer. The pressure sensitive adhesive composition may further comprises (E) an antioxidant. Particularly, the pressure sensitive adhesive **polymer** has a **glass** transition temperature of -80 to -20 deg.C and a weight average molecular weight of 250,000 or more.

9/12 © EPODOC / EPO

- PN - [JPH06305248](#) A 19941101
- PR - JP19930096016 19930422
- AP - JP19930096016 19930422
- DT - I
- FI - B41M5/18&101A; B41M5/18&101C; B41M5/28&280; B41M5/337&212
- FT - 2H026/AA01
- PA - NIPPON PAINT CO LTD
- TI - REVERSIBLE THERMAL RECORDING MATERIAL
- AB - PURPOSE: To obtain a reversible thermal recording material wherein control of thermal energy for writing and erasing is simple by a method wherein a recording **layer** consisting of an amorphous molecular material such as specific structured aminobenzene compound or the like is provided on a base material. CONSTITUTION: Specific amounts of one kind or two kinds or over selected from aminobenzene compound expressed by the formula I (R1, R2 represents aromatic cycle group), triphenylamine compound expressed by the formula II [Q is R3 and N-R4, R5 represent (R3, R4, R5 represents an aromatic cyclic group)], and triphenylbenzene compound expressed by the formula III (R6, R7 represents an aromatic cyclic group) are dissolved in a solvent such as aromatic hydrocarbon or the like to prepare coating liquid for recording **layer**. The coating liquid for recording **layer** is applied onto a substrate such as a **glass** plate, a **plastic** film, etc., dried to **lamine** a recording **layer**, and a reversible thermal recording material is formed. Further, in the case of recording using a laser, a pigment and a **dye** which **absorb** laser beams can be contained in the recording **layer**.

10/12 © EPODOC / EPO

- PN - [GB581607](#) A 19461018
- PR - GB19440015512 19440815
- AP - GB19440015512 19440815

DT - *

CCI - [G03C5/16](#) ; [G03C1/36](#)

PA - LEONARD VINCENT CHILTON; RICHARD ROBERT ROBINSON

TI - Materials for radiography

AB - 581,607. Sensitive materials for radiography. CHILTON, L. V., and ROBINSON, R. R. Aug. 15, 1944, Nos. 15512 and 15513. [Classes 98 (i) and 98 (ii)] Radiographic sensitive material for recording X-rays or gamma rays is provided on both sides with a protective colloid **layer** containing substances which **absorb** the radiation other than X-rays or gamma rays to which the material is sensitive, the layers being permeable to but not spontaneously removable by alkaline photographic developing solutions, but removable by other means at a later stage in the processing. The processing can consequently be carried out other than in a dark room. The photographic emulsion is carried on a support of **glass**, paper or film, the protective colloid being one of the polymeric nitrogenous substances containing amino groups described in Specifications 514,427 and 537,232, e.g. deacetylated chiten or piperidyl methyl zein which are removed in an acid bath, e.g. the fixing bath. Metal alginates soluble in ammonia are also suitable as are interpolymers of maleic anhydride with methyl methacrylate or styrene soluble in acetone, methylene chloride or aqueous or alcoholic ammonia. A liquid composition comprising gum and either skimmed milk or gelatin or both may be applied to yield a colloid **layer** which is resistant to alkaline baths, but may be removed after treatment in the developing solution by gentle rubbing. Unhardened gelatin may also be used, being removed by treatment with warm water. Alternatively, a **layer** permeable to alkali of developer strength, such as methyl methacrylate **polymer**, may be applied through an adhesive, e.g. any of the above-mentioned colloids, the **layer** being stripped off after the development. A fluorescent **layer** may be carried by the protective **layer** and be stripped off therewith. A wetting agent is added to the composition of the protective layers to facilitate their removal. The edges of the pack are sealed with opaque paper or fabric or by coating with a composition similar to the protective **layer**. Nitro-substituted cyanines are carbocyanines, e.g. 2,21-diethyl-5,51-dinitrothiocarbocyanine-p-toluene sulphonate may be added to the emulsion to reduce its sensitivity to visible light without impairing the sensitivity to X-rays and gamma rays. Carbon black is the preferred material for rendering the protective **layer** opaque, although a red or orange **dye** may be used. A pattern or device is printed on the **surface** of the opaque coating to facilitate centring of the film and to indicate the side to face the source of X-rays. Specifications 114,933, [Class 98 (i)], 540,252, 543,993, [Group IV], 573,917 and 575,512 also are referred to.

11/12 © EPODOC / EPO

PN - [EP0263641](#) A2 19880413

PNFP - EP0263641 A3 19900725
- EP0263641 B1 19940420

PR - US19860916609 19861008

AP - EP19870308683 19870930

DT - *; Rep

CT - || STSE (A3)
[EP0136070](#) A1 19850403 [A] (OPTICAL DATA INC [US]);

	FR2460023 A1 19810116 [A] (HITACHI LTD [JP]); EP0181077 A2 19860514 [A] (TOSHIBA KK [JP]); EP0089168 A1 19830921 [A] (TOKYO SHIBAURA ELECTRIC CO [JP])
CCI	- G11B7/24
CCA	- Y10S430/146
PA	- (A2) OPTICAL DATA INC [US] - (B1) PHILIPS ELECTRONICS NV [NL]
TI	- (A2 B1) Method for making an erasable optical data storage medium. - (A3) ERASABLE OPTICAL DATA STORAGE MEDIUM HAVING A ZONED INTEGRAL RECORDING LAYER
AB	- (A2) An erasable optical data storage medium has an integral recording layer (11) including an expansion zone (18) and a retention zone (16) having different optical and thermal-mechanical properties. A uniform integral layer of dyed polymer material (14) has the dye leached out of the surface region and a second dye diffused into the surface region to create a retention zone (16). The retention zone (16) has a higher elastic modulus and glass transition temperature than the underlying expansion zone (18) and is adapted to absorb and transmit light which is centered about a different wavelength than the expansion zone (18). The medium is adapted to be used with a non-ablative and non-vesicular method to create and erase optically detectable deformations (24) in the retention zone.

12/12 © EPODOC / EPO

PN	- DE3913674 A1 19901031
PR	- DE19893913674 19890426
AP	- DE19893913674 19890426
DT	- *
CT	- DE2903012 C2 []; DE3606617 A1 []; DE3526823 A1 []; US4822134 A []; US4147407 A []; EP0170185 A2 []
CCI	- G02B6/4403 ; G02B6/448
PA	- RHEYDT KABELWERK AG [DE]
TI	- Flat optical fibre cable - with specified adhesive, carrier foil and cover band
AB	- A flat optical fibre cable has cores with two plastic layers, joined by a wax-like substance with embedded pull relief threads to a carrier band and a cover band . The carrier band is made of PE foil and the cover band is a compressible layer of plastic foam. The optical fibres (1) have cores (2) with two plastic cover layers (3, 4) and are joined by a wax-like adhesive or UV-hardening lacquer (6) to a carrier foil (9) of PE. Reinforcing threads of aramide (8) or of glass absorb the pull. The cover layer (7) is made of compressible plastic foam. ADVANTAGE - This joins the optical fibres adequately to each other and to the carrier foil, but absorbs transverse shear forces.

The optical fibres are easy to individualise, if required.

[SS 14]