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Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

- (88) Date of publication of the international search report:
28 February 2013

(54) Title: UV-LED-LIGHT SOURCE

(57) Abstract: The invention relates to a LED-light source comprising a UV-LED embedded in a reflector housing and optionally covered by a transparent material, wherein the reflector housing is made of a polymeric material comprising (A) a semi-crystalline aliphatic polyamide (PA), obtained from aliphatic diamines and aliphatic dicarboxylic acids, and optionally other monomeric building blocks in an amount of at most 10 mole %, relative to the total molar amount of monomeric building blocks in the polyamide, and (B) a UV-reflecting pigment or filler. The invention also relates to a water purification device comprising the LED-light source. The invention also relates to a lighting armature comprising a mixing chamber comprising multiple UV-LEDs embedded in a reflector housing and optionally covered by a transparent material, wherein the mixing chamber comprises a reflection wall, at least part thereof made of a polymeric material as mentioned hereabove.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2012/052550

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-3, 7-9

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2012/052550

A. CLASSIFICATION OF SUBJECT MATTER
INV. C08K3/00
ADD.

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)
C08K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2009/012933 A1 (DSM IP ASSETS BV [NL]; RULKENS RUDY [NL]; VAN DIJK HANS KLAAS [NL]; JA) 29 January 2009 (2009-01-29)	1,2,7-9
A	the whole document -----	3



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"&" document member of the same patent family

Date of the actual completion of the international search

28 June 2012

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2009012933 A1	29-01-2009	CN 101765627 A	30-06-2010
		EP 2170982 A1	07-04-2010
		JP 2010534257 A	04-11-2010
		KR 20100051669 A	17-05-2010
		TW 200911881 A	16-03-2009
		US 2010270577 A1	28-10-2010
		WO 2009012933 A1	29-01-2009

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3, 7-9

with polyamide selected from A-4,4, PA-4,6, PA-4,8, PA-4,10
and PA-6,6

2. claim: 4

with particle size in the range of 0.05 to 5 micrometer

3. claim: 5

with silica, silica alumina, zinc dioxide

4. claim: 6

with powdery or needle like fillers other than (B)

5. claims: 10-12

device

6. claims: 13-15

with mixing chamber
