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(54) **COATING PIGMENTS AND METHODS OF MAKING THEREOF**

(57) Dielectric pigments having a metallic appearance for radar compatible coatings and methods for making such dielectric pigments are provided. In one example, the dielectric pigment includes a flake. The flake includes a plurality of alternating layers of dielectric materials including a first layer formed of a first dielectric material having a first refractive index in the visible spectrum range and a second layer disposed adjacent to the first dielectric layer and formed of a second dielectric material having a second refractive index in the visible spectrum range that is different than the first refractive index.

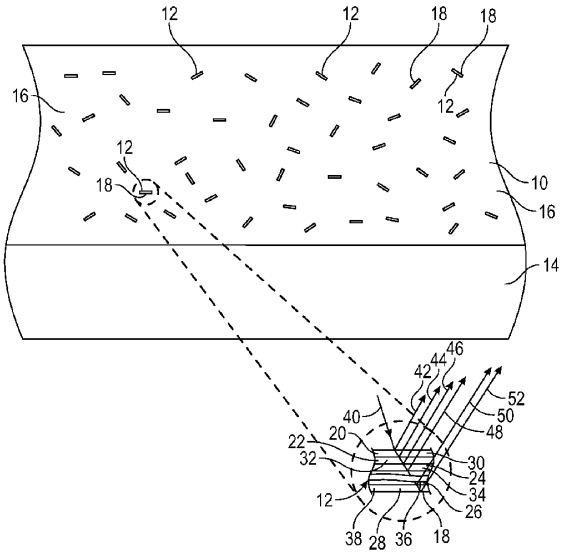

FIG. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 23 18 7964

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	EP 2 559 739 A1 (JDS UNIPHASE CORP [US]) 20 February 2013 (2013-02-20) * paragraphs [0037], [0046] - [0051], [0081], [0084]; figure 5b * -----	1-5, 7-12,16 6,13-15	INV. C09C1/00 G01J3/46 G01J1/46 C09D7/62
X	WO 2020/225328 A1 (OREAL [FR]) 12 November 2020 (2020-11-12) * paragraphs [0303] - [0332]; claims 1-3,13-17 * -----	1-16	C09D5/33

TECHNICAL FIELDS SEARCHED (IPC)

C09C
G01J
C09D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	27 February 2024	Siebel, Eric

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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27-02-2024

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 2559739 A1	20-02-2013	CN 102952418 A	06-03-2013
		CN 105419392 A	23-03-2016
		EP 2559739 A1	20-02-2013
		HK 1182410 A1	29-11-2013
		HK 1220714 A1	12-05-2017
		US 2013045338 A1	21-02-2013
		US 2017306158 A1	26-10-2017
WO 2020225328 A1	12-11-2020	BR 112021021594 A2	04-01-2022
		CN 113795555 A	14-12-2021
		EP 3966288 A1	16-03-2022
		FR 3095777 A1	13-11-2020
		JP 2022532095 A	13-07-2022
		JP 2023181222 A	21-12-2023
		KR 20210151158 A	13-12-2021
		US 2022313566 A1	06-10-2022
		WO 2020225328 A1	12-11-2020

EPO FORM P0459

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