US009408790B2

(12) **United States Patent**
Bickford

(10) **Patent No.: US 9,408,790 B2**
(45) **Date of Patent: *Aug. 9, 2016**

(54) **COSMETIC COMPOSITIONS WITH NEAR INFRA-RED (NIR) LIGHT-EMITTING MATERIAL AND METHODS THEREFOR**

(71) Applicant: **ELC Management LLC**, Melville, NY (US)

(72) Inventor: **William Robert Bickford**, Ronkonkoma, NY (US)

(73) Assignee: **ELC MANAGEMENT LLC**, Melville, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 248 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/095,862**

(22) Filed: **Dec. 3, 2013**

(65) **Prior Publication Data**

US 2014/0161851 A1 Jun. 12, 2014

Related U.S. Application Data

(60) Provisional application No. 61/735,611, filed on Dec. 11, 2012.

(51) **Int. Cl.**

A61K 8/19	(2006.01)
A61Q 19/00	(2006.01)
A61Q 5/00	(2006.01)
A61K 8/27	(2006.01)
A61K 8/25	(2006.01)
A61Q 7/00	(2006.01)
A61Q 19/02	(2006.01)
A61Q 19/06	(2006.01)
A61Q 19/08	(2006.01)

(52) **U.S. Cl.**

CPC ... ***A61K 8/27*** (2013.01); ***A61K 8/19*** (2013.01); ***A61K 8/25*** (2013.01); ***A61Q 5/006*** (2013.01); ***A61Q 7/00*** (2013.01); ***A61Q 19/00*** (2013.01); ***A61Q 19/02*** (2013.01); ***A61Q 19/06*** (2013.01); ***A61Q 19/08*** (2013.01); *A61K 2800/434* (2013.01); *Y10S 977/773* (2013.01)

(58) **Field of Classification Search**

CPC A61K 2800/434

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,215,724 A 11/1965 Strobel et al.
3,439,088 A 4/1969 Edman

(Continued)

FOREIGN PATENT DOCUMENTS

EP 1296639 12/2005
JP 61-18708 1/1986

(Continued)

OTHER PUBLICATIONS

Z Pan, Y-Y Lu, F Liu. "Sunlight-activated long-persistent luminescence in the near-infrared from Cr3+-doped zinc gallogermanates." Nature Materials, vol. 11, Jan. 2012, pp. 58-63, published online Nov. 20, 2011.*

(Continued)

Primary Examiner — Isaac Shomer

(74) *Attorney, Agent, or Firm* — Cynthia R. Miller

(57) **ABSTRACT**

Cosmetic or dermatological compositions and substrates, containing a NIR light-emitting material, and methods for stimulating healing and/or regenerative properties in the skin, hair and/or scalp are provided.

22 Claims, 4 Drawing Sheets