



Ionic liquids for active photonics components fabrication.

Autorzy

Krzysztof P. Rola
Adrian Zajac
Maciej Czajkowski
Andrea Szpecht
Maria Zdończyk
Marcin Śmiglak
Joanna Cybińska
Katarzyna Komorowska

Rok wydania

2019

Czasopismo

Optical Materials

Numer woluminu

89

Strony

106-111

DOI

10.1016/j.optmat.2019.01.003

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

We report the new fluorescent polymerizable imidazolium-based ionic liquids for photonics application. We investigate two approaches: one ionic liquid (IL) contains the active fluorescein dianion as an intrinsic part of the polymerizable ionic liquid structure. The second liquid is based on the mixture of polymerizable ionic liquid with optically active europium(III) nitrate hydrate. We demonstrate the polymerization abilities of both liquids by means of electron beam in vacuum conditions. Furthermore, we measure the light emission properties of liquid and polymerized structures. The results reveal that IL with europium(III) nitrate hydrate yields emission spectrum with Eu^{3+} bands not only as a liquid but also as a polymerized solid microstructure, which is important for its application in active photonics components.

Słowa kluczowe

Photonics, ionic liquids, electron beam, Fluorescein, europium, Polymerization

Adres publiczny

<http://dx.doi.org/10.1016/j.optmat.2019.01.003>

Strona internetowa wydawcy

<http://www.elsevier.com>

Plik został wygenerowany dnia 2026-10-06 12:53:08

Adres w repozytorium <https://old.chem.uni.wroc.pl/pl/repozytorium/hKoO4H3>.