

Accepted Manuscript

Research paper

Synthesis and electropolymerization properties of axially disubstituted silicon phthalocyanines bearing carbazole units

Hüseyin Baş, Zekeriya Biyiklioglu

PII: S0020-1693(18)30712-6
DOI: <https://doi.org/10.1016/j.ica.2018.08.003>
Reference: ICA 18403

To appear in: *Inorganica Chimica Acta*

Received Date: 9 May 2018
Revised Date: 7 August 2018
Accepted Date: 7 August 2018

Please cite this article as: H. Baş, Z. Biyiklioglu, Synthesis and electropolymerization properties of axially disubstituted silicon phthalocyanines bearing carbazole units, *Inorganica Chimica Acta* (2018), doi: <https://doi.org/10.1016/j.ica.2018.08.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Synthesis and electropolymerization properties of axially disubstituted silicon phthalocyanines bearing carbazole units

Hüseyin Baş^a, Zekeriya Biyiklioglu^{a*}

^aKaradeniz Technical University, Department of Chemistry, 61080 Trabzon, Turkey

Abstract

In this study, axially {4-[3-(9H-carbazol-9-yl)propoxy]phenyl}methoxy and ({3,5-bis[3-(9H-carbazol-9-yl)propoxy]phenyl}methoxy) substituted silicon phthalocyanines were synthesized by reaction of SiPcCl₂ with {4-[3-(9H-carbazol-9-yl)propoxy]phenyl}methanol and {3,5-bis[3-(9H-carbazol-9-yl)propoxy]phenyl}methanol in the presence of NaH in toluene. The new silicon phthalocyanines (SiPcs) were characterized by standard spectroscopy methods. Synthesized silicon phthalocyanines were electrochemically characterized with voltammetry techniques. The electrochemical studies exhibited that while SiPcs gave only Pc-based reduction processes during the cathodic potential scan, electropolymerizable {4-[3-(9H-carbazol-9-yl)propoxy]phenyl}methoxy and ({3,5-bis[3-(9H-carbazol-9-yl)propoxy]phenyl}methoxy) substituents triggered the coating of SiPcs with the oxidative electropolymerizations.

Keywords: Synthesis, Silicon phthalocyanine; Carbazole; Cyclic voltammetry; Electropolymerization.

Corresponding author; Tel: +90 462 377 36 64, Fax: +90 462 325 31 96
E-mail addresses: zekeriya@ktu.edu.tr (Z. Biyiklioglu)

Download English Version:

<https://daneshyari.com/en/article/7750168>

Download Persian Version:

<https://daneshyari.com/article/7750168>

[Daneshyari.com](https://daneshyari.com)