$(51)\ International\ classification\ \frac{(G01N0027490000,\ G01N0027280000,\ G01N00273000000,\ G01N0027416000,\ G01N0027403000)}{(G01N0027416000,\ G01N0027403000)}$ 

:NA

:NA

:NA

(22) Date of filing of Application :23/07/2022

(43) Publication Date: 05/08/2022

## (54) Title of the invention: Nanomaterial composites for electrochemical detection of phenol

(71)Name of Applicant: 1)Dr. Manoj Kumar Praharaj Address of Applicant :Assistant Professor, Department of Physics, Ajay Binay Institute of Technology, Cuttack, Odisha, India, Pin: 753014 Cuttack 2)Dr. Pallavi N 3)Dr. N. Mujafarkani

4)Dr. F.M. Mashood Ahamed 5)Dr. B. Tirumala Rao 6)Dr. Ch. Rajyalakshmi 7)Mr. Kishor Danao 8)Dr. Srinivas Ganganagunta 9)Mrs. Vijayshri Rokde

10)Mr. Amal G. S. 11)Dr. D. V. Lokeswar Reddy Name of Applicant : NA

Address of Applicant : NA (72)Name of Inventor:

1)Dr. Manoj Kumar Praharaj Address of Applicant :Assistant Professor, Department of Physics, Ajay Binay Institute of

Technology, Cuttack, Odisha, India, Pin: 753014 Cuttack 2)Dr. Pallavi N

Address of Applicant :Assistant Professor, Department of Environmental Sciences, JSS Academy of Higher Education & Research, Mysuru, Karnataka, India, Pincode: 570015

Mysuru

Address of Applicant :Assistant Professor, PG and Research Department of Chemistry, Jamal Mohamed College (Autonomous), Tiruchirappalli, Tamilnadu, India, Pincode: 620020

Tiruchirappalli

4)Dr. F.M. Mashood Ahamed

Address of Applicant : Assistant Professor, PG and Research Department of Chemistry, Jamal Mohamed College (Autonomous), Tiruchirappalli, Tamilnadu, India, Pincode: 620020 Tiruchirappalli

5)Dr. B. Tirumala Rao
Address of Applicant :Associate Professor in Physics, Department of Basic science, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India, Pincode: 534202 Bhimavaram —

6)Dr. Ch. Rajyalakshmi

Address of Applicant : Associate Professor in Chemistry, Department of Basic science, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India, Pincode: 534202 Bhimavaram —

7)Mr. Kishor Danao

Address of Applicant : Assistant Professor, Department of Pharmaceutical Chemistry, Dadasaheb Balpande College of Pharmacy, Nagpur, Maharashtra, India, Pincode:440037

8)Dr. Srinivas Ganganagunta

Address of Applicant :Senior Faculty in Physics, Engineering Department, University of Technology and Applied Sciences-IBRA, IBRA, North Al Sharqia Region, Oman, Postal

9)Mrs. Vijayshri Rokde

Address of Applicant : Assistant Professor, Department of Pharmaceutical Chemistry, Dadasaheb Balpande College of Pharmacy, Nagpur, Maharashtra, India, Pincode: 440037

10)Mr. Amal G. S.

Address of Applicant :Navaneetham, Vikas Nagar 105, Pattathanam, P.O., Kollam, Kerala, India, Pincode: 691021 Kollam

11)Dr. D. V. Lokeswar Reddy

Address of Applicant :Assistant Professor, Humanities and Social Sciences Department, JNTU College of Engineering, Pulivendula, Kadapa, Andhra Pradesh, India, Pincode: 516390 Kadapa

(57) Abstract

In accordance with the present invention, phenols may be identified through the utilization of an electrochemical sensor that contains a first compound, a working electrode, and an electrolyte in contact with the working electrode, wherein the first compound operatively undergoes a redox reaction at the working electrode to form a second compound that operatively reacts in situ with the phenol, wherein said redox reaction possesses a detectable redox couple, and wherein the sensor is adapted It's possible that the phenol is anything like a cannabinoid or a catechin

No. of Pages: 20 No. of Claims: 5

(86) International Application :PCT//

Filing Date

Filing Date (62) Divisional to Application

Filing Date

(87) International Publication

(61) Patent of Addition to Application Number