



FACULTY OF SCIENCE
UNIVERSITY OF IBADAN,
IBADAN, NIGERIA

INTERNATIONAL CONFERENCE
ON
SCIENCE AND SUSTAINABLE
DEVELOPMENT IN NIGERIA



CONFERENCE PROGRAMME AND
BOOK OF ABSTRACTS



THEME:
SCIENTIFIC RESEARCH AND SUSTAINABLE
DEVELOPMENT IN NIGERIA

DATE: 13 - 17 May, 2013

Venue: Conference Centre, University of Ibadan, Ibadan, Nigeria.
Faculty of Science Lakeside Lecture Theatre.



IBADAN 2013



SSD 106

**SYNTHESIS, CHARACTERIZATION AND ANTIBACTERIAL
EVALUATIONS OF NOVEL HYBRID POLYESTERAMIDE-
URETHANES PREPARED FROM YELLOW OLEANDA SEED OIL**

**Siyanbola T.O.^{1, 2*}, James O.O.^{2, 3}, Rao B.V.S.K.⁴, Narayan R.¹,
Olaofe O.⁵, Akintayo E.T.⁵, Raju K.V.S.N.^{1*}**

¹Polymers and Functional Materials Division, Indian Institute of Chemical Technology,

Hyderabad- 500007, India.

²Chemistry Department, College of Science and Technology, Covenant University, P.M.B. 1023, Ota, Ogun state, Nigeria.

³Liquid Fuels Section, Central Institute of Mining and Fuel Research, Digwadih Campus, Dhanbad 828108, JH, India.

⁴Centre for Lipid Research, Indian Institute of Chemical Technology, Hyderabad-500007, India.

⁵Chemistry Department, University of Ado-Ekiti, P.M.B. 5363, Ado-Ekiti, Nigeria.

*Corresponding author: tolusconi@gmail.com

ABSTRACT

Air drying polyesteramide-urethanes resins were synthesized from *Thevetia peruviana* seed oil commonly known as Yellow oleanda (a tropical ornamental shrub) having about 68.8% unsaturated and 30.9% saturated fatty acids. The physico-chemical characterization of the optimized unsaturated FAME such as hydroxyl value, iodine value, saponification value, refractive index, inherent viscosity were carried out using standard methods. Through condensation reaction the N,N'-bis(2-hydroxyethyl) *Thevetia peruviana* (HETA) prepared from the FAME reacted with isophthalic acid to form polyesteramide. The latter undergo urethanation with H^{1,2}MDI. The structural elucidation of the moisture cured polyesteramide-urethane coating was based on FTIR, ¹H-NMR and ¹³C-NMR spectroscopic methods. The coatings films were evaluated for its antibacterial activity and thermal stability properties on TGA and DSC. The SEM of the coating films was also examined.

SSD 107

A CRITICAL ASSESSMENT OF THE NIGERIAN RURAL ELECTRIFICATION POLICY

Diji C.J.

Mechanical Engineering Department, University of Ibadan, Ibadan, Nigeria
E-mail: cj.diji@mail.ui.edu.ng, dijichuks@yahoo.com, chuksdiji@hotmail.com

ABSTRACT

The problem of access to modern energy services is a major developmental issue confronting rural communities globally, particularly in Asia and sub-Saharan Africa. Modern energy services are benefits derived from modern energy sources such as electricity, natural gas, clean cooking fuels and mechanical power, that contribute to human well-being. This study takes a critical look at the problems and constraints of rural electrification in Nigeria. It also appraised the various policies and practices that have driven rural electrification in Nigeria, the level of implementation and the prospects of providing universal access to electricity services in rural areas of the country.

Keywords: Rural areas, Electricity, Policy, Nigeria

SSD 108

SEASONAL PREDICTION OF RAINFALL IN THE SOUTHWESTERN NIGERIA

Adeniyi Mojisola Oluwayemisi and Dilau Kabiru Alabi*

Department of Physics, University of Ibadan, Ibadan, Nigeria

*E-mail: kdilau@yahoo.com

ABSTRACT

The availability of quantitative means of probing anticipated rainfall is essential for the purposes of planning and policy formulation everywhere in the world. This paper attempts to present some results of an ongoing experiment on seasonal prediction of