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Thermal decomposition of cobalt(III), nickel(II), copper(II), palladium(II) and platinum(II) complexes of N-ethyl-N'-(4'-methylthiazol)-2ylthiourea

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Thermal decomposition of Co(III), Cu(II), Ni(II), Pd(II), and Pt(II) complexes of N-ethyl-N'-(4'-methylthiazol)-2ylthiourea (EthMeTzTu), HL, have been studied by TG, DTG, and DTA curves. The complexes have the molecular formulae as CoL_3 , $[CuLCl(H_2O)]$ and $[CuL_2 \cdot 2(H_2O)]$ a square for ML_2 ($M = Ni(II), Pd(II)$ and $Pt(II)$), and $[Pd(HL)Cl_2]$. The TG curves show that all complexes decompose in two stage to yield a free metal in $CoCl_3$ and PdL_2 complexes, while NiL_2 , $[CuL_2 \cdot 2H_2O]$ and PtL_2 gave NiS, CuS and PtS respectively, $[CuLCl(H_2O)]$ gave $Cu(SCN)Cl$, $[Pd(HL)Cl_2] \cdot 2HCl$ gave $Pd(SCN)_2$

Biography

Suhair Mansour Jambi has completed his PhD in Organic Chemistry at the University of Jeddah College of Science, Department of Chemistry (2011). She is working as an Associate Professor in the Faculty of Science for Girls at the University of Jeddah.

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Hydroconversion of n-C10 alkanes using functionalized AlMCM-41 as catalysts

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The hydroconversion of n-C10 was studied over functionalized AlMCM-41 with platinum rate exchange (0.5—4 wt%) and ammonium ions (95%). The n-C10 underwent conversion with bi-functional catalysts Pt/H-AlMCM-41. The tests were carried out in a continuous fixed bed reactor under the following conditions of atmospheric pressure, ratio alkanes/H₂ 5:1, temperature (up to 600 °C), acidity and space velocity (0.1 h⁻¹ < WHSV < 2.1 h⁻¹). Relatively high yields of light products were obtained. Ptn+/H-AlMCM-41 catalysts showed a good catalytic activity.

The study revealed bimodal distribution; the adsorption of n-alkanes on acids sites and then their subsequent conversion. Thus; this phenomenon is improved by the textural/ structural characteristics and (Ptn+/H) bi-functionalization, responsible for the acidity on the inner surface of catalysts. This work has established a close relationship between structure, selectivity, activity and acidity of functionalized AlMCM-41. The nature and distribution of the obtained products suggest that the bi-functional catalysts show a good performance and better selectivity in hydrocracking reactions than hydroisomerization with its accompanying steric effects biased for multibranched products.

Biography

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Anti-Inflammatory activity Of newly synthesized 7-chloro-2-methyl-4H-benzo [d] [1,3]-oxazin-4-one and 3-amino-7-chloro-2-methyl-quinazolin-4(3H)-one

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Heterocyclic chemistry comprises at least half of all organic chemistry research worldwide in particular, heterocyclic structures form the basis of many pharmaceutical, agrochemical and veterinary products. The condensation of Methyl-2-amino-4-Chlorobenzoate with acetic anhydride yielded the cyclic compound 2-methyl 7-Chloro-1, 3-benzo-oxazine-4-one (1) which further produce 3-Amino-2-Methyl 7-Chloro quinazolin-4(3H)-ones (2) via the reaction with hydrazine hydrate. The compounds synthesized were unequivocally confirmed by means of Infrared, Nuclear Magnetic Resonance (¹H and ¹³C), Gas Chromatography-Mass spectrophotometry and Elemental analysis. Compound 1 and 2 has Anti-inflammatory activity of 96.78%, 95.71% and 97.62%, 95.35% at 10mg/kg and 20mg/Kg dose levels. Compound 1 has IR spectrum showed signals for carbonyl functional group at 1662 cm⁻¹, C-O and C-H stretch vibrations at 1102 cm⁻¹ and 2871 cm⁻¹ respectively. The ¹H NMR spectrum showed three aromatic protons at δH 7.59, 7.16 and 6.40 and a vinyl methyl protons at δH 2.57. In the ¹³C NMR spectrum, the ester carbonyl resonated at δC 168.08, while the aromatic carbons resonated in the range δC 113.40 – 149.23. The resonances at δC 153.13 and δC 22.15 were due to the imine oxygenated carbon (C-1) and the methyl carbon respectively. Compound 2, had NMR data similar to 1, except for an additional signal at δH 5.80 in the ¹H NMR spectrum which was attributed to the amino protons (2H). Compound 2 had a higher anti-inflammatory activity than Compound 1. The compounds synthesized had a higher anti-inflammatory activity than Indomethacin, a standard anti-inflammatory drug

Biography

DR. OSARUMWENSE PETER OSARODION has completed his PhD in Organic Chemistry at the Federal University of Benin, Benin City, Edo State, Nigeria at the age of 35 years. He is the Lecturer of Ondo State University of Science and Technology, Ondo State, Nigeria a premier University. He has published more than 28 papers in reputed journals and has been serving as an editorial board member of repute

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Green Chemistry and Food Application: Incorporation of *Rosmarinus officinalis* Leaves into Fresh Cheese

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Rosmarinus officinalis L. leaves can be valorized by their uses in the production of healthy foods. Dry rosemary leaves powder and its lyophilized ethanolic extract at different concentrations (g/100 g) were used for the formulation of fresh cheeses. This study evaluated whether or not this fortification could affect some physicochemical characteristics, phenolic composition and antioxidant capacity of fresh cheeses along storage period at 5°C. Results showed that this enrichment did not affect physicochemical parameters (pH, acidity, proteins, fat) of the formulated cheeses while its effect on cheese color parameters was more marked. Moreover, this incorporation has increased substantially values of total phenolic content (TPC) and ABTS scavenging activity during storage period compared to the control cheese. Principal components analysis (PCA) was performed and results confirmed a strong relationship between antioxidant activity and these phenolic compounds. Additionally, a correlation between physicochemical parameters, antioxidant activity as well as the sensory characteristics was carried out. Cheeses fortified with 0.5%, 0.75% of powder and 0.5% of extract, were most appreciated (60%–80%) by the panelists.

In conclusion, the consumers can successfully use rosemary as dairy supplements as it improves markedly the TPC and the antioxidant activity of cheese as well as a distinctive taste, aroma and acts as flavor enhancer for better acceptability.

Biography

Lila Boulekbache Makhlouf has her expertise in food processing and green chemistry.

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