12TH ASIAN CHEMICAL CONGRESS (12ACC)
August 23 – 25, 2007
Putra World Trade Centre, Kuala Lumpur, Malaysia
BOOK OF ABSTRACTS
Remora fish and great whites. Bumblebees and fruit trees. Clownfish and anemone.

Examples of win-win partnerships.

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ECG 906 (Poster)

STRUCTURAL AND SURFACE PROPERTIES OF PRECIPITATION DERIVED ZINC OXIDE AND ITS DEGRADATION TO METHYL ORANGE

Abdul Hamid Abdullah, Lee Ek Giat, Uma Gaya Ibrahim
Department of Chemistry, Faculty of Science, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Malaysia

Zinc oxide precursor was prepared by the chemical precipitation resulting from the reaction of zinc acetate dihydrate with ammonium hydrogen carbonate. The zinc oxide powders, namely ZnO400, ZnO600 and ZnO800 was obtained by subsequent calcination of the precursor at 400°C and 800°C. The materials were characterized by BET, TGA, SEM, XRD methods and by its surface area using BET methods. The calculation products revealed hexagonal structure. With increasing calcination temperature, the average crystallite size increased while the surface area decreased. ZnO400 exhibits the smallest average crystallite size (49 nm) and the highest surface area (11m²/g). Evaluation of photodegradation performance against methyl orange as a model contaminant demonstrated considerable efficiency. The results indicate that the photodegradation process is influenced by the surface area of sample. The addition of oxidant, H2O2, however gave a negative impact on the photodegradation efficiency.

EGC 908 (Poster)

PERFORMING LABORATORY EXPERIMENTS FOR THE CURRICULUM OF PRINCIPLES OF ORGANIC CHEMISTRY USING THE TECHNOLOGY OF GREEN MICROSCALE CHEMISTRY IN THE KINGDOM OF SAUDI ARABIA

Ahuil Aba Ali1, Tqheer Al-Sufiani2, Hassan Medaei3, Hasuan A. Albur1
1Faculty of Education, Oman Qwa University (Makkah), 2Chemistry Department Al Taif University (Al Taif), 3Faculty of Education-King Abulaziz University, 4Faculty of Sciences-Chemistry Department-King Abdullah University (ledak) Saudia Arabia, 5helbar@kau.edu.sa

Out of the point of cooperation between green chemistry school at western region of Saudi Arabia, with Radhame center in South Africa and the UNESCO. We applied the technology of microscale chemistry in performing the experiments of the practical curriculum of the principles of general organic chemistry including the process the filtration, simple distillation, crystallization, chromatographic separation, element test, detection of functional groups in organic compounds, and preparation of some esters by reflux. In addition, the preparation of acetylene and ethylene gases using the tools of microscale chemistry. Radhame center has provided us by modern microscale tools. The Arabic edition of the curriculum, sponsored by UNESCO, is available to us. It will be prepared in its final shape to be published in the website of the organization which is concerned with the practical curricula of green microscale technology. Oua Aba Ali, Master degree student, Hanadi Medaei, PhD student, and the lecturer Tqheer Al-Sufiani in Al Taif University have performed most of the above mentioned experiments using the Arabic edition for practical curricula sponsored by UNESCO, by the tools purchased from Radhame center in South Africa. The experiments were performed easily and successfully in a relatively short time in comparison with the traditional laboratory. In addition, to the higher safety profile of the latter and to the cost of

EGC 907 (Poster)

COMPLETE ELECTROCHEMICAL DECOLORIZATION OF CHLOROBENZENES IN THE PRESENCE OF NAPHTHALENE MEDIATOR

Asmath, A. Jaali1, N. Fathin M. Pazirae2, Sufiyya Akhtar2, Murri Sundang2, Norsnida Tajuddin2 and Sagieg Trinawadyono1
1Faculty of Chemical and Natural Resources Engineering, 2Ibn Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor, Malaysia.

Email: asmathi@fkskm.utm.my

Electrochemical decolorization of chlorobenzenes in organic solutions was studied. Electrolysis of chlorobenzene in acetonitrile solution in a one-compartment cell fitted with a platinum cathode and a zinc anode at 66 mA/cm² and 0°C was found to be

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