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Dielectric Properties of PbZrO₃ Ceramics with Guard Ring Electrodes

Myint Thu*

Abstract

Guard ring electrodes are useful devices which enable accurate dielectric measurement to be made on small insulating material. The edge capacitance can cause measurement errors, since the current flows through the dielectric material. PbZrO₃ powder is prepared by solid state reaction of starting chemicals such as lead oxide (PbO) and zirconium dioxide (ZrO₂) at 900°C and 1000°C for 1h. Dielectric properties of PbZrO₃ ceramic are interpreted by ϵ_r -f, C-f and $\tan\delta$ -f characteristics.

Key words – dielectric properties, antiferroelectric, ceramic

Investigation of Radon Concentrations of Smoke of Cigar, Cheroot and Cigarette Samples

Sein Myaing¹, Chit Po²

Abstract

The pathological effects, like the respiratory system, functional changes and the occurrence of lung cancer cells for the people are led by the exposure of alpha radiation from the smoke of cigar, cheroot and cigarette. The smoke of the cigar, cheroot and cigarette samples was measured for the radioactive pollutant, especially alpha radiation, by using CR-39 (polyallyldiglycol carbonate, $C_{12}H_{18}O_{17}$) Solid State Nuclear Track Detectors. The estimation of radon concentrations was calculated from the alpha track density. High radon concentrations as 24.18 ± 0.35 Bqm⁻³ and 18.9 ± 0.22 Bqm⁻³ were found in the smoke of the cigar samples, higher than annual effective dose of ICRP (International Commission on Radiological Protection) action level 3 mSvY⁻¹.

Key words: Solid State Nuclear Track Detectors (SSNTDs) and ICRP (International Commission on Radiological Protection)

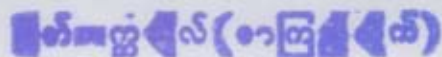
On the t -Linked Overrings of an Integral Domain

Thin Thin Mar*

Abstract

In this paper, basic definitions and notations on star operation ($*$ -operation) are firstly introduced. Next, how the set of t -linked overrings is related to the set of overrings as well as FC-domain and FO-domain are discussed.

Key words : star operation, t -linked overrings, FC-domain and FO-domain



Advertisement Calls by Tokay Gecko (*Gekko gecko* Linnaeus, 1758) in Relation to Environmental Condition

Naw Lah Pwai Paw*

Abstract

The Tokay Gecko (*Gekko gecko* Linnaeus, 1758) is one of the largest species of gecko in the world. They are nocturnal arboreal gecko and their distribution ranges from northeast India, Bhutan, Nepal, and Bangladesh throughout Southeast Asia, Philippines to Indonesia and western New Guinea (Yu *et al.*, 2011). They are arboreal, hiding in hallow trees and roofs during the day. The present study is based on the 648 calls of Tokay geckos (n=4) living in human dwellings and on trees of Myeik University Campus. Different call structures based on the microphone recordings were analyzed to know the basic structure of advertisement calls viz. the number of chirps, chirp repetition rate, total duration, and dominant frequency etc. The association with that of call structure and ambient environmental condition which were recorded during vocal activity were addressed.

Key words: Advertisement call, chirp number, duration, frequency

Morphological study on four species of genus *Cleome* and antipyretic activity from roots of *Cleome gynandra* (L.) Merr.

Myint Myint San*

Abstract

Medicinal plants on four species of genus *Cleome* were collected from Tharkayta Township, Bahan Township, Yangon Region and Aung-lan Township, Magwe Region. In this paper, the morphological characters of four species were determined by the available literature. In addition, the antipyretic activity from roots of *Cleome gynandra* (L.) Merr has been described. The morphological study showed that these plants were herbaceous, annual, cylindrical stem with puberulent and branches. Moreover, the acute toxicity test was carried out by feeding the albino mice with aqueous and 70% ethanolic extracts from roots of *C. gynandra* (L.) Merr. It was observed that both extracts were free from acute toxicity or harmful effect. In the antipyretic activity, the aqueous and 70% ethanolic extracts of roots were tested on Wister albino rats. This test indicates both extracts can be used to reduce fever when compared to that of a standard paracetamol.

Key words: Four species of genus *Cleome* and antipyretic activity from roots of *Cleome gynandra* (L.) Merr.

Petrography of Pyawbwe Sandstones in the Pyawbwe Area, Minbu Township

Aye Aye Aung*

Abstract

Pyawbwe sandstones are exposed in the Pyawbwe area of Minbu Township occupying the western trough of Central Cenozoic Belt. These sandstones consist of Pyawbwe Formation (Aquitanian) of Upper Pegu Group (Miocene). The present research mainly focuses on petrography of Aquitanian sandstones. The sandstones from the study area are mainly composed of quartz, feldspar, rock fragments, glauconites, chlorite, mica, bioclasts grains, accessory minerals and cements. Petrographically, the majority of sandstones from the study area are lithic arkose and feldspathic lithicarenite. The sediments of the study area are derived from dissected arc and transitional arc to undissected arc provenances. The early diagenetic features such as grains compaction, distortion of mica, broken shell fragments, grains compaction of calcitization and glauconization are well marked. Late diagenetic features are formation of concretion and nodules, corrosion of grain and iron oxide pigmentation.

Key words : Central Cenozoic Belt, Diagenetic Features, Miocene

Mineralogical and Petrological Studies of Southern Thakhinma Taung Area, Patheingyi Township, Mandalay Region

Thidar Win¹

Abstract

This area is located at about 9 miles northeast of Mandalay and lies in the Mogok Belt. It is underlain by medium to high-grade metamorphic rocks that are intruded by pegmatite. This area is generally composed of four major metamorphic rock units, quartzites, gneisses, marble and calc-silicate rocks in descending order, which were later intruded by granites and pegmatite veins. The overall structure pattern assumes a domal outline, but towards the north, the emplacement of granite creates a north-plunging anticlinal structure. The area had been again traversed by a couple of NW-SE trending faults. The region as a whole had been subjected to a regional metamorphism and superimposed by thermal metamorphism. On the basis of the mineral assemblages, these metamorphic rocks are considered belonging to the almandine-amphibolite facies. It is estimated that the required pressure range is from 4kb to approximately 8kb and temperature is between 500° to 700°. Fairly large resources of construction materials, road metals and decorative stones are recognized. A few semi-precious stones such as tourmaline and garnet in pegmatite vein are of mineralogist's interest.

Key words: Thakhinma Taung, Mogok Belt, regional metamorphic rocks, amphibolites facies, petrological.

Distribution and abundance of phytoplankton from Masanpa and Panataung in Myeik adjacent waters

Khin Yu Nwe¹, Nyo Nyo Tun², Khin May Chit Maung³ and Kay Khine Soe¹

Abstract

In this research, distribution and abundance of phytoplankton species were studied. The phytoplankton samples were collected only from the surface water. The study areas are Masanpa and Panataung in Myeik adjacent waters and it was carried out from June 2010 to March 2011. A total of 59 species belonging to 47 species of diatoms, 1 species of silicoflagellate and 11 species of dinoflagellates were identified. The occurrence of species in two areas was recorded. *Thalassionema frauenfeldii*, *Thalassionema nitzchioides*, *Coscinodiscus sp* and *Chaetoceros sp* were the dominant species in two study areas. *Ceratium furca* and *Bacteriastrum sp* were the richest species of dinoflagellates and diatoms in Masanpa. *Pleurosigma sp* was the dominant species in Panataung. The density of phytoplankton standing stocks ranged from 4507.69/m³ to 16623.08/m³ at Masanpa and 2923.08/m³ to 3500/m³ at Panataung. The highest density was observed in Masanpa. This paper presented the distribution and abundance of phytoplankton from Masanpa and Panataung in Myeik adjacent waters.

Key words: abundance, distribution, Masanpa and Panataung, Myeik adjacent waters.

Seasonal occurrence and abundance of Caridean shrimp caught in bag net fishery in adjacent area of Myeik Estuary

Kay Khine Soe¹, Nang Mya Han², Nyo Nyo Tun³, Khin Yu Nwe⁴ and Khin May Chit Maung⁵

Abstract

Samples were collected from the stationary bag net set on the tidal creek of the Pat-taei village, adjacent area of Myeik Estuary during June 2013 and March 2014. Collected Caridean shrimp was identified up to species level and their fishery biology was recorded. A total of 10 species of Caridean shrimps, belonging to 3 families under Palaemonidae, Alpheidae and Hippolytidae were recorded. The result of monthly sex ratio showed that the females mostly outnumbered the males and that gravid females occurred in all species throughout the study periods. The CPUE (Total catch (kg)/effort) of bag net fishery rate ranged from the highest (47.1) in January and the lowest (4.7) in December.

Key words: Caridean shrimp, Palaemonidae, Alpheidae, Hippolytidae, Sex ratio, CPUE (Total catch (kg)/effort)

Gastropod habitat associations in Mangroves of Myeik areas

Khin May Chit Maung¹, Nang Mya Han², Khin Yu Nwe¹ and Kay Khine Soe¹

Abstract

Habitat associations of gastropods were studied in mangroves of Myeik areas. Eleven species of gastropods belonging to 8 genera of 5 families were observed. The mangrove associated gastropods species observed were *Neritina picea*, *Neritina auriculata*, *Littoraria conica*, *L. melanostoma*, *L. scabra*, *Sphaerassiminea miniata*, *Telescopium telescopium*, *Cerithidea cingulata*, *C. obtusa*, *Pythia plicata* and *Ellobium aurisjudae*. Species identifications were mainly based on the external shell characters such as shell shape, opercular shape and colour and ornamentation of the shell. The occurrence, distribution and habitats occupied by each species were presented.

Keywords: Gastropods, mangrove

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ခေတ်လယ်မွန်ကျောက်စာများတွင်တွေ့ရသော သဒ္ဒါဖွဲ့ပုံထူးခြားမှုများ

ဇော်ဝင်း^၁၊ နွေးသဇင်လတ်^၂

စာတမ်းအကျဉ်း

မွန်စာပေခေတ်သည် ခေတ်(၃)ခေတ်ရှိပြီး တစ်ခေတ်နှင့်တစ်ခေတ်သည် နှစ်ပေါင်း (၄၀၀) ခန့် ကွာခြားသကဲ့သို့ စာပေအရေးအသား သဒ္ဒါဖွဲ့ပုံအနေဖြင့်လည်း တိုးတက်ပြောင်းလဲကွာခြား လာသည်ကို တွေ့ရပါသည်။ သဒ္ဒါဖွဲ့ပုံတွင် စကားလုံးအဆင့်၊ ပုဒ်အဆင့်၊ ဝါကျအဆင့် အဆင့်အားလုံး၌ အနည်းငယ်စီ ပြောင်းလဲလာသည်ကို တွေ့ရပါသည်။ ထိုသို့သော ခေတ်လယ်မွန်သဒ္ဒါဖွဲ့ပုံ၏ ရှေးမွန်နှင့်မတူဘဲ ထူးခြားနေမှုများကို ဤစာတမ်းတွင် လေ့လာဖော်ထုတ်သွားပါမည်။ ထိုသို့လေ့လာရာ၌ စကားလုံးအဆင့်ထူးခြားမှု၊ ပုဒ်အဆင့် ထူးခြားမှု၊ ဝါကျအဆင့်ထူးခြားမှု ဟူ၍ ကဏ္ဍ (၃) ရပ်ခွဲ၍ လေ့လာတင်ပြထားပါသည်။

သော့ချက်စကားလုံး - ဝါကျအဆုံးသတ်စကားလုံး၊ မြန်မာဆန်သောစကားလုံး ၊ လုံးတွဲစကားလုံး၊ စကားလုံးအဆင့်၊ ပုဒ်အဆင့်၊ ဝါကျအဆင့်၊ သဒ္ဒါဖွဲ့ပုံ။

The Innovations in Modern Myanmar Novel

Ohnmar Phyu*

Abstract

The changes in Myanmar literature were very great during the colonial period (1885-1945). How form, theme, style and subject matter changed diachronically is studied in this paper.

Key words: innovations, colonial period, modern literature, great depression

An Analysis of *Straightforward Level 1A* in Terms of Thinking Skill Levels and Knowledge Types

Khin Khin Yone*

Abstract

This study aims to find out the thinking skill levels and knowledge types in the instructions of activities from *Straightforward Level 1A* – the adapted version of English in General Purpose for Arts and Science undergraduate students in Myanmar. For this purpose, the instructions from *Straightforward Level 1A* are collected and analyzed according to Revised Bloom's Taxonomy – a two-dimensional-matrix – proposed by Anderson L. W. and Krathwohl D. R. (2001). Then the frequencies and percentages of occurrence of different thinking skill levels and types of knowledge are calculated. It is hoped that this study would shed light upon the role of *Straightforward* coursebooks in developing thinking skills among Myanmar students.

Key words: Revised Bloom's Taxonomy, cognitive process levels, knowledge types

A Geographical Analysis on Concentration of Agriculture in Yekyi Township

Moh Moh Khaing¹, Cherry Win Thaw²

Abstract

This research is an attempt to assess the concentration of agriculture in Yekyi Township. Agricultural activities of Yekyi Township vary from place to place and from time to time. Thus the land is suitable for growing field crops. The major crops under the study period (2001-02 and 2012-13) are analyzed by method for the calculation of concentration index to highlight the spatial and temporal changes that influence the existing agricultural activities.

Key words: changes in concentration agriculture

A Comparative Study of Plato's view on Aristocracy of Intelligence and Aristotle's view on Democratic System

Saw Lar Ka Baw¹, Tin Tin Nyo²

Abstract

For the prosperity of the country, some thinkers think that political theories are crucial. But some thinkers argue that resourceful persons are more important than political systems. Plato, one of the great thinkers, emphasizes resourceful persons as a crucial factor for the prosperity of the country. On the other hand, Aristotle extols political systems as a crucial factor for the development of the country. But the problem here is, 'Why both political systems and resourceful persons are crucial?'³ After Second World War there were two rival political systems in the world, the countries who established their countries with democratic systems and communism. His history, the countries which used democratic system came to be prosperous. But in this present day, though China uses communist system, the country is prosperous. It concerns with the resourceful Chinese political leaders.⁴ So, for the prosperity of the country, both political systems and resourceful persons are crucial. Best political system without resourceful persons is impossible. And the resourceful leaders without best political system will turn to tyranny.⁵ Evaluative method along with the principles of induction, deduction and analogy are used in this paper.⁶ The descriptive method, comparative method and evaluative method are used to solve research problem.⁷

Key words: political systems, resourceful persons, prosperity

ဗုဒ္ဓဒဿနလာကံနှင့်လူသား

နှင်းထွေး*

စာတမ်းအကျဉ်း

ဤစာတမ်းတွင် ဗုဒ္ဓဒဿနသည် ကံနှင့်ကံအကျိုးပေးကို ယုံကြည်သောဝါဒ ဖြစ်သည်။ ကောင်းမှုကို ဆုတ်လျှင် ကောင်းကျိုး ရ၍မကောင်းမှုလုပ်လျှင် မကောင်းကျိုးကိုရရှိမည်ဖြစ်သည်။ ကုသိုလ်နှင့်အကုသိုလ်၊ အတိတ်ကံ နှင့်ပစ္စုပ္ပန်ကံ၊ ကံအမျိုးအစား၊ ကံအကျိုးပေးပုံ၊ ကံအကျိုးပေးရာ အချိန်ကာလ၊ ကံအကျိုးပေးရာတုံ့ရှာနု အလိုက် ကွဲပြားခြားနားပုံ တို့ကို သာဓကများဖြင့် ဖော်ပြထားပါသည်။ ထိုဘုံဘဝတို့ကို ခန့်တီးနေသည်မှာ ကံသာလျှင်ဖြစ်ကြောင်း၊ သတ္တဝါမှန်သမျှ ကံသာ ကိုယ်ပိုင်ဥစ္စာရှိကြောင်း၊ အတိတ်ကံ ပြုသောကံကြောင့် ယခု ပစ္စုပ္ပန်တွင် ကောင်းကျိုးဆိုးကျိုးကို ခံစားရသကဲ့သို့ ပစ္စုပ္ပန်ကံ ပြုသောကံကြောင့် အနာဂတ်တမလွန်လောကတွင် ကောင်းကျိုး ဆိုးကျိုး ခံစားရပုံတို့ကို ဖော်ပြထားပါသည်။

Determination of Nutritional Values of Myeik Traditional Food (Moht-kalemae)

Tun Oo¹, Nay Thwe Kyi²

Abstract

Moht- kalemae is one of the well- known Myeik traditional foods. The samples of Moht- kalemae were collected from the traditional food shops in Myeik Township. The nutritional values of the collected Moht- kalemae sample such as carbohydrate, protein, fiber, ash, moisture, energy value, salt, total sugar and starch were determined by using AOAC methods. A substantial increase in carbohydrate, total sugar, starch and decrease in fat, ash, fiber were observed in the Moht-kalemae sample. Moreover, Mineral contents of this sample such as Fe, Ca and Mg were detected by atomic absorption spectrophotometer. Out of these elements, Mg which assists with bone growth and proper muscle functioning for hearts and kidneys was also found in great amounts.

Key words: Moht- kalemae, nutritional values, mineral contents