

2,6-吡啶雙羧基及 1,2-雙(4-吡啶)乙烷 之銅(II)配位化合物之合成、鑑定、 及其結構分析

Synthesis, Characterizations, and Crystal Structure of Copper(II) Complex Containing, 2,6-Pyridinedicarboxylate and, 1,2-Bis(4-pyridyl)ethane

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摘要：利用水熱合成，得到雙核的銅(II)錯合物， $[\text{Cu}_2(\text{pda})_2(\text{dpe})(\text{H}_2\text{O})_2] \cdot 2\text{H}_2\text{O}$ (**1**) (其中 pda = 2,6-吡啶雙羧基, dpe = 1,2-雙(4-吡啶)乙烷)。使用 FTIR 光譜儀以及 X-Ray 晶體繞射儀，測定產物晶體結構及其性質，結果顯示錯合物以銅(II)離子為配位中心，五個配位原子為 pda 上的二個羧基各提供一個 O 原子、一個配位水分子、pda 上的 N 原子、及 dpe 上的一個 N 原子，形成扭曲四角錐型的幾何結構。錯合物結構類似啞鈴形狀，包含兩個銅原子，兩個吡啶雙羧酸配位基和一個雙吡啶配基，以及兩個配位水分子和兩個晶格水分子。吡啶雙羧基及配位水分子間的氫鍵作用，以及吡啶環之間的 π - π 吸引力，此錯合物自組裝成 3-D 超分子化合物。

關鍵詞：2,6-吡啶雙羧酸、1,2-雙(4-吡啶)乙烷、氫鍵、水熱合成

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Abstract: A novel copper(II) complex, $[\text{Cu}_2(\text{pda})_2(\text{dpe})(\text{H}_2\text{O})_2] \cdot 2\text{H}_2\text{O}$ (**1**) (pda = 2,6-pyridinedicarboxylate, dpe = 1,2-bis(4-pyridyl)ethane), has been hydrothermally synthesized and characterized by FTIR spectroscopy and single crystal X-ray diffraction. The metal ion center is in the distorted square-pyramidal coordination environment. Oxygen atom from one water hold the axial sites, and two oxygen atoms from one pda ligand, two nitrogen atoms from one pda ligand and the dpe occupy the square planar sites. The complex **1** is in a dumbbell shape which contains two copper atoms, two pda ligands, one dpe ligand, two coordination water ligands and two lattice water molecules. In addition, the intermolecular O-H...O hydrogen-bonding and π - π stacking interactions further extend the title complex to form a 3-D structure.

Key words: 2,6-Pyridinedicarboxylic acid, 1,2-Bis(4-pyridyl)ethane, Hydrogen bonding, Hydrothermal synthesis

某社區保護管束中的青少年對愛滋病的健康信念

Health Belief Toward AIDS Among Juvenile Delinquents In A Community Setting

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摘要：本研究根據健康信念模式，目的為描述某社區接受保護管束的青少年對愛滋病的認識及對愛滋病預防與使用保險套的信念。研究對象為北台灣某社區少年法庭的保護管束者，包括 22 名男生與 8 名女生，平均年齡 14.9 歲。採結構式問卷進行資料收集。研究結果發現研究對象在研究前六個月內有發生性行為的比率為 10%，對愛滋病的認識同時存在正確與錯誤的觀念，對愛滋病的易感性認知、對使用保險套的利益性及障礙性認知的平均得分，以四分量表來分析，分別為 2.05，1.57 與 3.11，對愛滋病的認識與各項健康信念間的關係並不顯著。本研究的結果可以應用在發展此易感群體的愛滋病衛教方案。

關鍵詞：健康信念模式、愛滋病、青少年

Abstract: The aim of this study was to describe the level of AIDS knowledge of the juvenile delinquents and to address the beliefs about the HIV/AIDS prevention and the condom use behavior according to the variables from the HBM theory. In a rural city of northern Taiwan, 30 juvenile delinquents consisted of 22 boys and 8 girls with mean age of 14.9 filled in a structure

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questionnaire assessing knowledge and health beliefs toward HIV/AIDS. The results showed that the prevalence of sexual intercourse was 10% within 6 months and the subject hold correct and misconception about HIV/AIDS knowledge simultaneously. The means scores on the perceptions of susceptibility to AIDS, barriers to condom use, and benefits of protected sex, out of a maximum of 4.0, were 2.05, 1.57, and 3.11 respectively. The relationships between knowledge and health beliefs were modest. The result of this research provides a context for structuring HIV preventive programs in application for such vulnerable populations.

Key words: Health Belief Model, AIDS, adolescent

日經 225 股價指數與指數期貨報酬率 之動態關係 DCC-GARCH 模型分析

DCC-GARCH Model for the Dynamic Relationship of the Nikkei 225 Stock Index and Futures Returns

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摘要：本文利用 Engle¹ 提出的動態條件相關多變量 GARCH 模型來探討由東京證交所推出的日經 225 股價指數報酬率以及大阪證交所與新加坡交易所推出的日經 225 股價指數期貨報酬率三者之間的動態關係，並且使用衝擊反應函數來分析三者之間的跨期動態效果。實證結果顯示，透過概似比例檢定可得知在模型配適上 t 分配優於常態分配，並且 DCC-GARCH- t 模型顯著優於 CCC-GARCH、CCC-GARCH- t 、及 DCC-GARCH 模型。此外，股價指數現貨與期貨報酬率之間皆存在正向回饋效果，其中大阪證交所之指數期貨報酬率對於其他兩者而言影響較大。在衝擊反應的分析中，非預期的 OSE 期貨變動對 Nikkei 225 股價指數有較大的衝擊，且非預期的 Nikkei 225 股價指數亦對 OSE- Nikkei 225 有較大的衝擊。綜上可知 Nikkei 225 指數報酬率與 OSE-Nikkei225 期貨報酬率不管在動態關係以及跨期動態效果上都有明顯的關係，往後若投資 Nikkei 225 股價指數時可加以應用彼此的關係來進行避險，達到降低投資風險的效果。

關鍵詞：日經 225、動態條件相關、多變量 GARCH、衝擊反應函數、回饋效果

Abstract: This paper investigates the dynamic relationship among the Nikkei 225 Stock Index and Futures trading on the Tokyo Stock Exchange (TSE), the Osaka Security Exchange (OSE), and Singapore International Monetary Exchange (SIMEX) using the Dynamic Conditional Correlation (DDC) multivariate GARCH model, proposed by Engle (2002). Moreover we use Impulse Response Function to analysis the intertemporal dynamic effect among the returns. The empirical results show that the t distribution is better than the normal distribution for the Nikkei 225, and that the DCC-GARCH-t model is better one for the Nikkei 225 than CCC-GARCH, CCC-GARCH-t, DDC-GARCH, and DCC-GARCH-t model, by Likelihood Ratio test. In addition, the returns of stock index and futures exist positive feedback effect with each other. Among that the return trading on OSE has more influence to others. In the Impulse Response Function analysis, we find that the responses of the return's innovation trading on TSE are relatively stronger than the others.

Key words: Nikkei 225, DCC, Multi-GARCH, Impulse response function, Feedback effect

音樂增進物理治療對嚴重慢性阻塞性 肺疾病患的復健成效

Effects of Music Enhanced Physical Therapy on Treatment Outcomes of Persons with Severe COPD

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摘 要：慢性阻塞性肺疾病包括慢性支氣管炎與肺氣腫，不僅嚴重危害大眾健康，而且每年因住院、急診、及居家照護所花費的醫療資源，更帶來龐大的社會負擔。在復健過程中，伴隨著運動所產生的呼吸困難症狀，常是阻礙病患繼續參與療程的原因。有鑑於此，本實驗計畫結合音樂與物理治療，利用音樂作為一種節奏式的聽覺刺激，藉以控制及調整病患在療程中的行走速度及呼吸型態，期望能增進復健療效，緩解呼吸不適症狀，提高參與動機，並給予心理上的支持，為病患提供一個更為人性化的復健療程。共有三位嚴重慢性阻塞性肺疾病患者參與此項為期五週的實驗計畫。參加者在第一週和第五週接受傳統式物理治療，在第二、三、四週則接受音樂增進物理治療。實驗結果顯示，在音樂治療的配合下，三位參加者在療程中的步行距離均有所增加，對呼吸困難症狀的適應程度也提升。同時，根據參加者自評之健康狀態問卷調查，參加者的生活品質也獲得改善。本研究結果顯示，音樂增進物理治療在嚴重慢性阻塞性肺疾病患者的呼吸症狀、運動耐力、及健康狀態上都有所助益。音樂結合物理治療的復健方式或許可提供醫療專業人員未來的研究方向，及病患參與復健療程時的選擇。

關鍵詞：慢性阻塞性肺疾病、音樂治療、物理治療、節奏式的聽覺刺激

Abstract: The purpose of this study was to investigate the effects of music enhanced physical

therapy on the rehabilitation of patients with severe chronic obstructive pulmonary disease (COPD). The effects were determined by measures of walking endurance, dyspnea management, and perceived health status. Music was used in this study as a pacing mechanism to facilitate participants' walking, and breathing movements following walking. Three patients, from a nursing home unit of a Veterans Affairs Medical Center in a Midwestern city, participated in the study. All of them were diagnosed with oxygen-dependent advanced COPD. The study was a single-subject research with ABA design. Each participant served as his own control. During the study, individual participants were treated for five weeks in physical therapy five times a week for a total of 25 sessions. They received conventional physical therapy for the first week (baseline phase), music enhanced physical therapy for the following three weeks (treatment phase), and conventional physical therapy again for the last week (return to baseline phase). Results indicated that the music enhanced physical therapy treatment protocol was effective in improving functional abilities in walking endurance and breathing efficiency. All three participants walked significantly longer distances under the music enhanced physical therapy than under the conventional physical therapy alone. Participants' tolerance of dyspnea after walking also increased. Participants did not require additional recovery time following walking as their walking distances increased and did not require increased supplemental oxygen during walking as they walked further distances. The results of improved perceived health status after music enhanced treatment indicated psychological improvements and increased cadences walked following the music enhancement phase implied physical improvements. Observation from the study also showed that participants increased their motivation in treatment participation. It was concluded that the music enhanced physical therapy was effective in increasing functional abilities, treatment engagement, and perceived health status in persons with severe COPD.

Key words: Chronic obstructive pulmonary disease (COPD), Music therapy, Music-enhanced physical therapy, Pacing

促進教師知識成長之個案研究

A Case Study of Enhancing Teacher Knowledge

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摘要：這份質的研究的目的是在於探討在台灣的一所高中內的教師對她們的英文讀書會是一種專業發展的模式之看法。此個案研究採用下列資料收集方法：(1)非正式的觀察與訪談；(2)團體訪談；(3)半結構式的個人訪談；以及(4)有關文件與紀錄。此研究的研究地點在嘉義高級女中的英文讀書會，它的特色是已持續 16 年以上。此研究的參訪者指出這個英文讀書會的優點包括：(1)學習英文；(2)充實觀點進而改善課堂上英文教學；(3)彼此交換教學經驗；(4)激進正面的學習；(5)促進智識發展；(6)增進友誼。這些優點幫助參訪者發展(1)加強英文因而增進教師的英文學科內容知識；(2)改善教師的一般教學法知識；和(3)改善教師的學科教學知識。這個英文讀書會的經驗顯示出教師在讀書會所引發的一些優點及問題。

關鍵詞：英文讀書會、教師專業發展、學科內容知識、教學法知識、學科教學知識

Abstract: The purpose of this qualitative research examined the extent to which Taiwanese educators in one selected high school in Taiwan viewed their English language study group as a professional development activity that contributes to their teaching. This case study employed the following data collection techniques: (1) informal observations and interviews, (2) focus group interview, (3) semi-structured individual interviews, and (4) documents and records. The site selected for this study was the National Chia-Yi Girls' Senior High School in Chia-Yi City in Taiwan. An important feature of this particular study group, the English Teachers Club, is that it had been in existence for 16 years. Participants in this teacher study group reported the benefits of this professional development activity included: learning English as a foreign language, gaining

ideas for improving classroom English instruction, and sharing teaching experiences, stimulating positive dispositions to learning, fostering intellectual development, and socialization and friendship. These benefits, I argue, helped participants to develop content knowledge, pedagogical knowledge, and pedagogical content knowledge. The experiences of the teacher study group revealed some of the successes and problems that the teachers experienced as their involvement in a study group evolved.

Key words: English Study Group, Teacher Professional Development, Content Knowledge, Pedagogical Knowledge, Pedagogical Content Knowledge

唐代四大詩人長江三峽行旅詩析論

The Poems of Analyzed Theories in Journey of Yangtze Gorges that the Four Great Poets Traveled by the Time of the Tang Dynasty

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摘 要：長江三峽是個特定的地域時空概念，也是歷來文人才子行旅至此歌詠寄情的好題材。三峽壯麗特殊的風光、奇異的神話傳說、豐富的歷史文化遺跡，在才子的筆下形成了獨特的三峽文學與三峽文化。唐人行旅往來多喜經由長江三峽水運航道，其中文人才子至此寄情題詠之詩歌最豐富而有特色者，當推李白、杜甫、白居易、劉禹錫等四大詩人，因其人生的遭逢經歷而在長江三峽留下許多重要的詩歌作品，成為膾炙人口的不朽詩篇，影響後人亦深。是以本文旨在探討此四家詩人行旅至此特殊之地理環境時其心情有何抒發，希望藉由這些唐代三峽行旅詩中所描繪的地理與人文為背景來闡釋其在文學上的表現與影響，從而認識作者當時的行蹤與其作品背後的意蘊和審美意趣。

關鍵詞：長江三峽、貶謫、竹枝詞

Abstract: The three gorges of Yangtze River are the specific area in a space time conception. It was a good data for poems and sentiments that the men of letters and scholars had been here before. The scenery was so magnificent with strange and fairy tales, and a lot of historic ruins which under the pen of the talent formed a great civilization. The Tang's folks like to pass through here by water from somewhere to three gorges. The four poets featured roles should be inferred, they are Li Po (李白), Tu Fu (杜甫), Pai Chu-i (白居易), and Liu Yeu-Shyi (劉禹錫). For they encountered

their careers and left so many important poem works to be on everybody's lips which achieved that it can never be decayed and also it affected the later people very deeply. Therefore this statement is researching the four poets' circumstances with the moods having what issue to be exposed, and affect the literature with background of the men of letters, and hereafter can realize the writers which their tracks and working papers that concealed some meanings behind the back with the interesting in pretty judgment.

Key words: The Three Gorges of Yangtze River, To Demote and Exile an Official, A Kind of Verse
Mainly about the Life of the Common People, Originating in the Tang Dynasty

「二重證據法」的具體實踐—王國維
古文字考釋在文史研究之運用
Specific Practice of the 「Dual Evidences Method」
— The application of Wang Guo-Wei's Ancient
Writing Observation and Interpretation in the
Study of Chinese Literature and History

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摘 要：王國維繼承了清代考據學家求實之精神，將「目驗」以考釋名物的傳統史學方法，發展成文獻與地下出土文物相結合的「二重證據法」，並從名物考釋上拓展為更為寬廣的文史乃至文化制度之研究，誠為治文史者另闢蹊徑。王國維的史學研究之所以能夠開新史學之先河，正在於他是「二重證據法」的創立者與實踐者；而王國維成為新史學之開山，也充分說明了「二重證據法」具有極高的理論價值和方法學上的意義，它的提出和廣泛的運用，對中國學術的近代化和科學化，有著深遠的影響。

關鍵詞：王國維、史學、二重證據法、甲骨文、金石文字

Abstract: Inherited the textual researcher's spirit of truth seeking in Cing Dynasty, Wang Guo-Wei expanded the tradition historical science of 「eye prove」 to be the 「dual evidences method」, connecting the facts from scientific literature and the excavations. He even expanded to be the study of a wilder area of literature and history or even to the study of culture system, from relic observation and interpretation. It can be said that he opened a new path for literature and history

administers. Wang Guo-Wei's study of history can be a starter of the new history study was because he was the creator and the practicer of the 「dual evidences method」. And the fact that Wang Guo-Wei became the founder of new history study also explained in full that the 「dual evidences method」 had high value in theory and significant meaning of the methodology. Its existence and widely applications had significant influences to the modernization and scientific ennoblement of Chinese literature.

Key words: Wang Guo-Wei, history, dual evidences method, inscriptions on bones, inscriptions on ancient bronzes and stone tablets

2005 年世界射箭錦標賽女子成績與 國內選手之比較

Archery Performance Comparison between World Cup Female and Domestic Cup in 2005

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摘要：由於射箭運動並不受身高及體型限制，是一項以持續的穩定性及準確度來論勝負的運動，亦是一項在國內運動中，足以在國際體壇與人一爭長短的項目。射箭選手每天不斷從事相同的射箭動作，主要目的就是在熟練自我射箭技術及成績的提升，並期望能在國際射箭大賽中獲得最後的勝利。本研究為掌握世界射箭選手成績表現的脈動，特以 2005 年世界射箭錦標賽女子成績與國內女子選手成績進行分析，希望能從彼此的差距中找出自我的弱點及所應加強的訓練方向。經本研究分析後，共可歸納出下列幾點結論：

- 一、國內女子射箭選手全項單局成績低於世界杯選手，其中 70 公尺的差距最大，30 公尺的差距最小。
- 二、會長杯及世界杯選手在各比賽距離成績的分析中，皆達顯著正相關性($p < .05$)，此即表示當其任一比賽距離有較佳的成績表現時，其它比賽距離也會呈現較佳成績的特性。
- 三、國內晉級各輪淘汰賽選手的平均成績低於世界杯選手。
- 四、在我國參加 2005 年世界杯 4 名女子選手中，其全項單局成績有 2 名選手增加，有 2 名選手呈現減少的現象。其中在國內成績表現最佳的選手，卻未在世界比賽中射出應有的水準，其是否因外在環境或比賽壓力等因素所影響，值得再作進一步的研究。

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五、經本研究發現，94 年國內青年杯、會長杯與 2005 年世界杯女子銅牌得主成績，皆優於其金、銀牌選手，其原因是否與選手的心理因素有關，仍有待深入的探討。

關鍵詞：奧運局、全項單局、射箭成績

Abstract: The performance of archery is heavily dependent on the consistent stability and accuracy, instead of the body size or height of archers. Moreover, it is one of the sports in our country whose level is competent to the world level. In order to upgrade the archery performance which can confidently win the international archery tournament, archers are required to practice everyday to achieve a consistent motion. The objective of the study is to keep tracking the current world level of the female archery through analyzing the performance of female archers qualified the World Cup and domestic competitions in 2005. After analyzing the performance differences, our weakness can be found and the associated major findings are summarized as follows:

1. There are four distances conducted in all three competitions, that is, 90, 70, 50 and 30 meters for female archers. The score difference of qualified archers between domestic cup and World Cup is the largest one in the 70-meter distance, and the smallest one in the 30-meter distance.
2. Performance correlations among four distances are all significant ($p < .05$) in the domestic Committee Cup and World Cup, so it implies that in average the archer performs well in one distance, so does the other three distances.
3. Averagely, the performance of the World Cup is always better than that of the domestics during the qualified round.
4. There are four female archers attend the domestic competitions and the World Cup, and half of them perform better in the World Cup. Surprisingly, the performance of the best female archer of our country is lower than her regular average, and it is worthy to find the causes in the future.
5. For each of the three cups (Committee Cup, Young Cup and World Cup), the scores of the bronze match are better than those in the championship match.

Keywords: Olympic round, Single FITA round, Score