出國報告（出國類別：其他）

2013 年第八屆國際薄膜物理與應用會議出國報告

服務機關：核能研究所
姓名職稱：陳恩仕　研究助理
派赴國家：中國大陸
出國期間：102 年 9 月 19 日~102 年 9 月 24 日
報告日期：102 年 10 月 23 日

摘　要

本次參加 2013 年第八屆國際薄膜物理與應用會議並發表論文，由中國上海東華大學松江校區承辦。本研討會主題範圍廣泛，包括：(1)薄膜物理 (2)薄膜材料 (3)薄膜技術 (4)薄膜應用等，邀請世界各地專家學者發表其薄膜相關專長領域之最新研究成果或研究心得。本所電漿環境節能計劃之核心技術電漿鍍膜，乃屬薄膜科技之範疇，希望藉由參與本次研討會及發表論文的機會，與國際上傑出之專家學者經驗交流吸收新知，獲得更廣之薄膜技術資訊及發展方向，對本所技術之提升有相當之幫助。

目　　次

一、目　的

本 2013 年第八屆國際薄膜物理與應用會議由中國上海東華大學承辦，中國國家自然科學基金委員會、上海科技、中國物理學會及上海市物理學會贊助。本研討旨在匯聚全世界從事薄膜相關領域之研究人員，展現其最新研究成果，促進知識與技術的交流。委員會之成員來自中國、德國、美國、俄羅斯、香港、日本、韓國及澳洲等國。發表於本研討會之論文將刊載於 Proceedings of SPIE，納於 EI、INSPEC 及其他科學與工程之資料庫中。本組有幸受邀於本研討會發表研發成果論文，實屬榮幸。其研討會介紹及論文接受函如附件所示。

本研討會主題：(1)薄膜物理(Physics of Thin Film)、(2)薄膜材料(Thin Film Materials)、(3)薄膜技術 (Technology of Thin Film)及皆(4)薄膜應用(Application of Thin Film)等，與本所電漿鍍膜技術皆有關聯，尤其是薄膜技術與薄膜應用，與本所之發展方向更是密切。

近 30 年以來，隨著半導體科技的突破，半導體元件尺寸從毫米走向微米、次微米，帶動全世界的科技研發走向更小的元件發展，實現了人類對工業品輕薄短之期望，擴大人類生活方式的可能性，薄膜技術在其中扮演了非常重要的角色。而長久以來化石燃料的消耗與溫室效應的增劇，使再生能源開發及環境保護議題之重要性與日俱增。薄膜科技不僅是半導體科技的支柱，且於再生能源領域占有重要地位，於環境保護應用上亦得有一席之地，諸如薄膜太陽電池、儲能元件，及隔熱材料等，不勝枚舉。

本所物理組研發之電漿鍍膜爲用於發展薄膜太陽能、薄膜儲能以及隔熱節能之技術，符合環保節能之世界潮流。希望藉參與本研討會發表研究成果論文的機會，與國際上相關領域之傑出專家學者交流，互相學習汲取新知，以獲得薄膜科技最新研發及應用之方向，期能於本所之發展有所裨益。

二、過　程

本次公差共六天，其中研討會議程四天，，行程規劃如表一。

表一、公差行程規劃表。

行程				公差地點		工作內容
日期	星期	地點		國名	地名	
		出發	抵達			
9/19	四	台北	上海			
9/20	五			中國	上海	出席第八屆國際薄膜物理與應用會議
9/21	六			中國	上海	出席第八屆國際薄膜物理與應用會議
9/22	日			中國	上海	出席第八屆國際薄膜物理與應用會議
9/23	一			中國	上海	主辦單位安排之參訪行程
9/24	二	上海	台北			

本 2013 年第八屆國際薄膜物理與應用會議地點於上海東華大學松江校區圖文信息中心舉行，於開幕時有二個演說，其後依主題(薄膜物理、薄膜材料、薄膜技術與薄膜應用)分組進行個別口頭演說。會議程序表如下：

	9 月 20 日	9 月 21 日	9 月 22 日	9 月 23 日
早晨		開幕 9:00~9:30 不分組演說 9:30~11:40	分組演說 9:00~12:00 I. 薄膜物理 II. 薄膜材料 III. 薄膜技術 IV. 薄膜應用	參訪行程
下午	報到 13:00~20:00	分組演說 13:30~18:05 I. 薄膜物理 II. 薄膜材料 III. 薄膜技術 IV. 薄膜應用 海報張貼 13:00~18:00	分組演說 13:30~18:00 I. 薄膜物理 II. 薄膜材料 III. 薄膜技術 IV. 薄膜應用 海報張貼 13:00~18:00	
晚間		晚宴		

上海東華大學共有二個校區，分別位於松江區與長寧區，占地面積近 2000 畝，校園環境宜人，係"上海市花園單位"。學校創建於 1951 年，前身是華東紡織工學院，1985 年更名爲中國紡織大學，1999 年更名爲東華大學。1960 年，由中國國家教育部確定之全國重點大學，是中國首批具有博士、碩士及學士三級學位授予之大學之一。

從上海虹橋機場到東華大學松江校區的交通如圖一，可乘虹橋機場附近的地鐵 2 號線，在中山公園站轉地鐵 4 號線至宜山路站，再從宜山路站轉搭地鐵 9 號線至松江大學城站下車，

步行約 20 分鐘可到達東華大學松江校區，如圖二；再步行約 10 分鐘可抵達會議舉辦場地圖文信息中心，如圖三。另一途徑是從上海浦東機場搭磁浮列車到地鐵龍陽路站，在該站搭地鐵 2 號線至世紀大道站再轉乘地鐵 9 號線，最後於松江大學城站下車即可。請參考圖一之上海地鐵路線示意圖。

圖一、上海地鐵路線示意圖。

Maps

圖二、上海東華大學松江校區平面圖。

圖三、上海東華大學圖文信息中心。

圖四、圖文信息中心大門，TFPA 歡迎海報。

研討會開幕日，接待櫃台。

圖五、開幕接待櫃台。

圖六、plenary session，與會人士於集合就座。

圖七、東華大學副校長致詞。

圖八、承辦王老師之致詞。

圖九、全體合照圖。

研討會的口頭報告會議室共有兩間，第一間會議室(Hall 2)供薄膜技術與薄膜應用的專題講者使用(如圖十)，第二間會議室(Room 7)則供薄膜物理與薄膜材料講題使用(如圖十一)。

圖十、第一演講廳 (Hall 2)。

圖十一、第二演講廳 (Room 7)

除了演講廳，學生海報張貼區亦規劃於廳外，如圖：

圖十二、海報張貼區。

圖十三、海報張貼區角落。

廠商展示區與休息區：

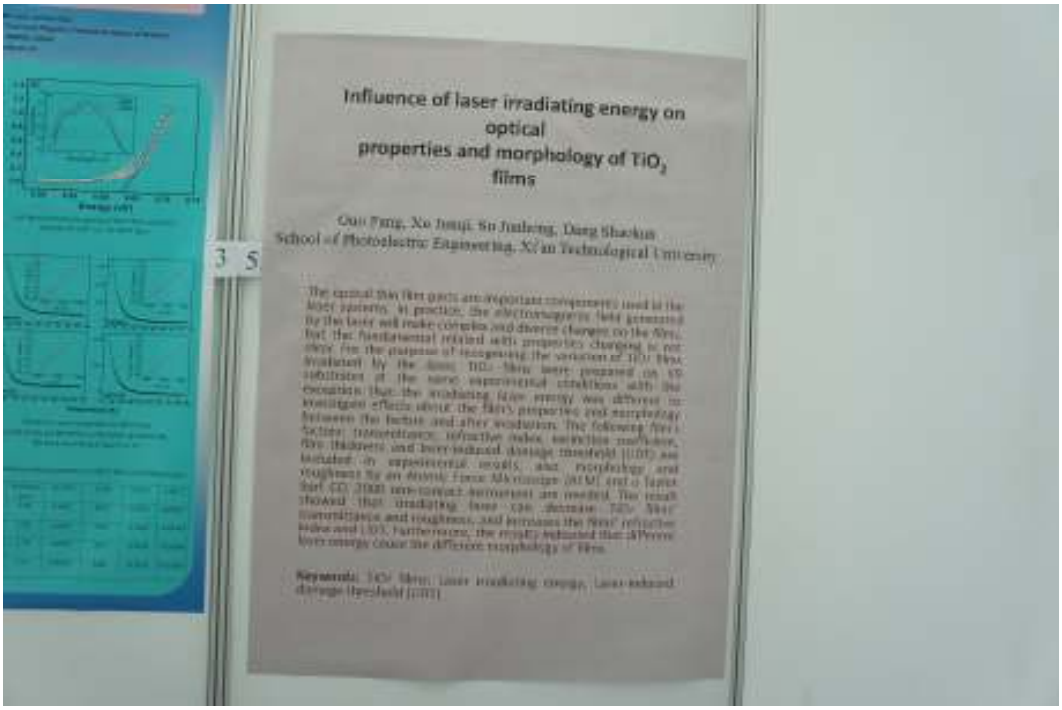
圖十四、廠商展示區與休息區。

於 22 日上午 11:35，職之口頭報告時間，報告期間之翦影：

圖十五、口頭報告。

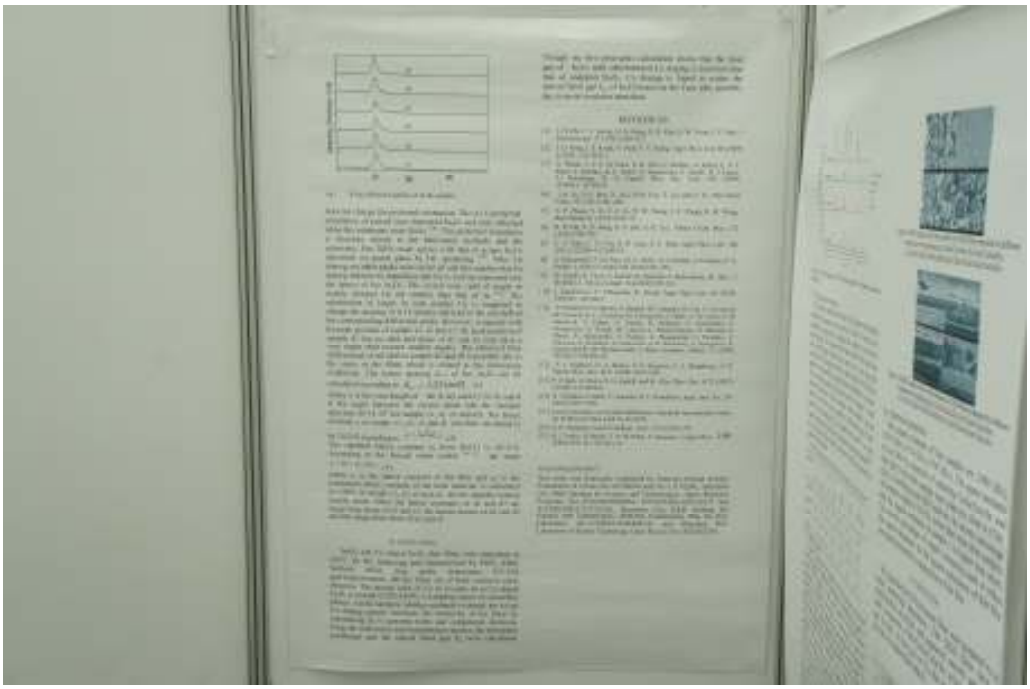
演講結束，現場問答：

圖十六、現場問答。



圖十七、學生海報一。

圖十八、學生海報二。



圖十九、學生海報二(續)。

圖二十、校園內之精神標語。

三、心　得

(一) 本出國公差報告之心得涉及他人研究成果之部份，就智慧財產之保密原則，不張貼其數據、圖形等資料，而僅以文字敘述。

(二) 中國上海高等研究院研究員李東棟博士發表以陽極電鍍施作於軟性鋁薄片得到一奈米粗糙結構可有效提升矽薄膜太陽電池的量子效率。李博士將軟性鋁薄片浸於電鍍液中電鍍三小時，在鋁片上蝕刻出六角蜂窩般的奈米級粗糙結構。將矽薄膜太陽電池鍍於其上，整體可得到優良的光散射效應、表面電漿子共振及波導效應，連帶地提升太陽電池的量子效率。相較於平面型矽薄膜太陽電池，元件特性的表現上，效率提升了 27%~31%。而此陽極電鍍法相較於一般奈米工法最大的優點是成本低廉，適用於工業生產，亦適用於捲對捲式的軟性基板。

(三) 莫斯科州立大學 Tikhonravov 教授提出薄膜科技與電腦計算結合的重要性。Tikhonravov 教授認爲現今的光學或光電科技已很難存在不應用薄膜科技的實例了。薄膜應用的範圍，從 hard X-ray 到遠紅外光，使用到的多層結構越來越複雜，例如 hard X-ray mirror，或遙距通訊用的濾波器，皆需要百層以上的薄膜結構。通常，這些複雜的薄膜結構還會受到其他施工條件的制約，例如總厚度，或是材料選擇等等。在如此高的規格、複雜度及後天限制下，勢將輔以電腦計算方能有效達成，甚至在過去認爲無法實現的元件皆因電腦的幫助而輕易獲致。這可以說薄膜科技搭配電腦輔助設計，可擴展薄膜科技應用的範圍，創造可能性。當然這些工藝上的進步有賴於人類對薄膜物理的了解及電腦計算科學上的進步。

(四) 蘇州大學唐建新教授針對串疊式有機發光二極體 OLED 的中間連接層(Interconnector)之傳輸機制作一系列的探討。串疊式 OLED 的中間連接層可有金屬-金屬(或金屬氧化物)、有機-金屬(或金屬氧化物)，及有機-有機等材料選擇，但在 OLED 的領域裡，此中間連接層的載子傳輸機制卻仍是爭議的話題。唐教授運用電學與光學測量方法來研究中間層的傳輸機制，其中電學方法之一是採用不同的 OLED 發光層堆疊順序來突顯中間層的作用；另一電學方法是用電容法量測不同材質的中間層其電容特性。其探究之技巧淺顯易懂，值得吾人取經學習，援引應用。

(五)來自德國 Paderborn 大學的 Artur Zrenner 教授專長是奈米半導體光學。Zrenner 教授使用了分子束磊晶的技術可在基板上成長砷化銦鎵、硒化鎘或氮化鎵的量子點，這些量子點的直徑非常微小，約在數十到一百奈米左右，電子在其內只會有兩個狀態：基態及激發態。電子受到雷射光的激發，可從基態到激發態，或從激發態到基態，就如同一個開關。在激發態的電子又會在量子點上形成光電流；隨著激發態的週期變化，光電流也有相應的相位變動，從而傳遞訊息於外界。這量子點的行爲因可受外力(如雷射)的操控，又具有開關的性質，如同現今微電子元件的閘極開關，是量子計算的基礎，也可應用於量子通訊。

(六) 太陽光伏元件的吸光能力是最基本也最需要提升的特性。太原理工大學崔豔霞教授專長是光的吸收。崔教授設計了一鋸齒狀結構的超材料(metamaterial)於薄膜上，可將紅外線於正向入射時有效地吸收達 95%，且頻寬相當寬，此吸收特性在一個很大的入射角範圍內依然可以維持。短波長的光會在鋸齒的尖端被吸收，而長波長的光則在鋸齒的底端被捕捉到，這是因爲這鋸齒狀結構的波導效應結合電漿子振盪，使光在鋸齒結構裡的速度減慢，最終被超材料吸收，吸收率達 95%，超過自然材料的極限而得名。

(七) 薄膜物理的領域中，膜層間的介面或表面效應往往是關鍵的所在。不論是單層薄膜或多層薄膜，其介(表)面上的原子排列並非理想地壁壘分明整齊一致，而是有一模糊地帶，或是不規則排列，有效的觀察之才能進一步控制其分布。同濟大學王占山教授常年研究薄膜物理，特地整理了全世界研究薄膜的非侵入式儀器方法，統整其量測之物理意義。其中研究薄膜表面方面，常見者有原子力顯微鏡 AFM，掃描電子顯微鏡 SEM、及穿透電子顯微鏡 TEM 等。而研究薄膜介面的技術中，Grazing Incidence X-ray Reflectometry (GIXRR)藉由對量測數據的擬合，可探索膜層間原子排列的模糊區域厚度；除了觀察膜糊區域，介面的原子聚積現象也有儀器可以測量，X-ray Scatterometry 是以 X-Ray 入射於薄膜，當 X-ray 遇到介面原子的聚積會產生散射或繞射現象，越粗的顆粒散射性越強，藉此可觀察平整度。此兩者研究介面之技術值得我們多加涉獵。

(八) 薄膜科技日新月異，復旦大學梅永豐教授整理了近年薄膜科技的進展。薄膜科技已逐漸從基材表面鋪設的薄膜走向更薄的境界，稱爲 nanomembrane，厚度大約 1 奈米~100 奈米；不僅如此，當今之 nanomembrane 科技更可將薄膜從其生成的基板取下，重新加工，再應用於其他工件上。Nanomembrane 因其極薄的尺寸，且可不依附基板而獨立作用，造成 nanomembrane 薄膜與塊材截然不同的機械特性，有時甚至可觀察到量子行爲，在應用上常可突破傳統工藝的界限。以 naonomembrane 捲成 microtube，可用於需要微形管柱的機械中。凡此不勝枚舉，吾人可從此獲得啓發，開創更多可能的視野。

(九) 俄羅斯的 Tikhonravov 教授專長爲光學鍍膜模擬，爲許多俄羅斯的高科技工業貢獻心力，是本領域之專家，亦恰與職之主要工作內容非常相關。於會後私下與 Tikhonravov 教授交流，彼此相見歡，爲同道中人，互留名片。

(十) 太原理工大學崔豔霞教授雖擅長將光吸收於薄膜中，崔教授對職之隔熱膜能將紅外光反射又能透射可見光的設計十分有興趣，頻頻欲了解其細節。於交談的過程中，得知崔教授是模擬電磁場於奈米結構傳導的專家，致力於開發奈米結構的高吸光膜，此藝是相當前瞻之技術，亦互留名片日後交流。

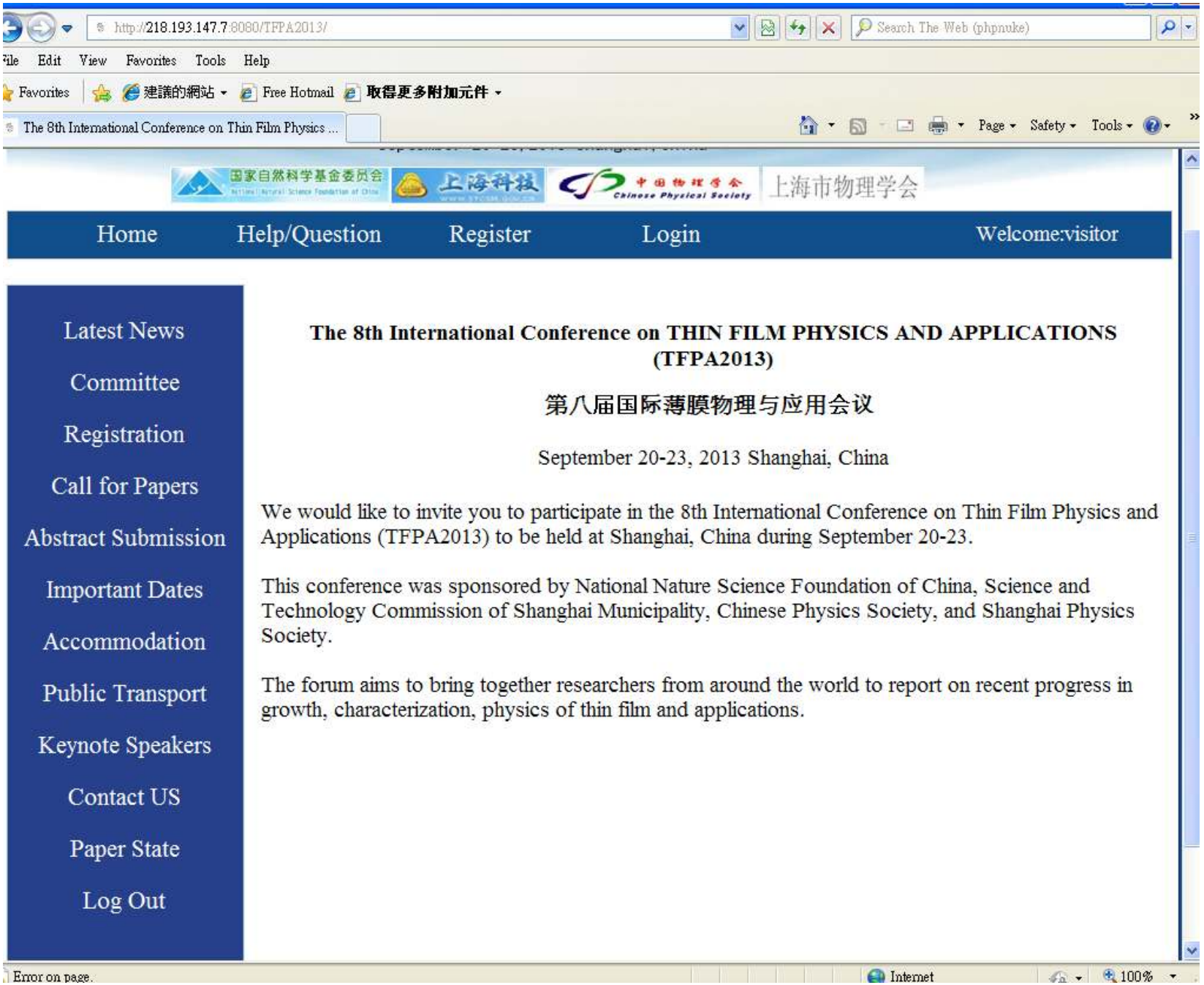
四、建 議 事 項

(一) 因上海市爲國際型都市，腹地廣大且交通線複雜。幸而其都市規劃近似於台灣，在許多方面有相似之處，摸索交通路線並無太大障礙。然而並非每個舉辦研討會之國家、城市都如此雷同，若於行前有前人的行程資料參考，將可省下許多交通時間，或是避免不必要之困境。

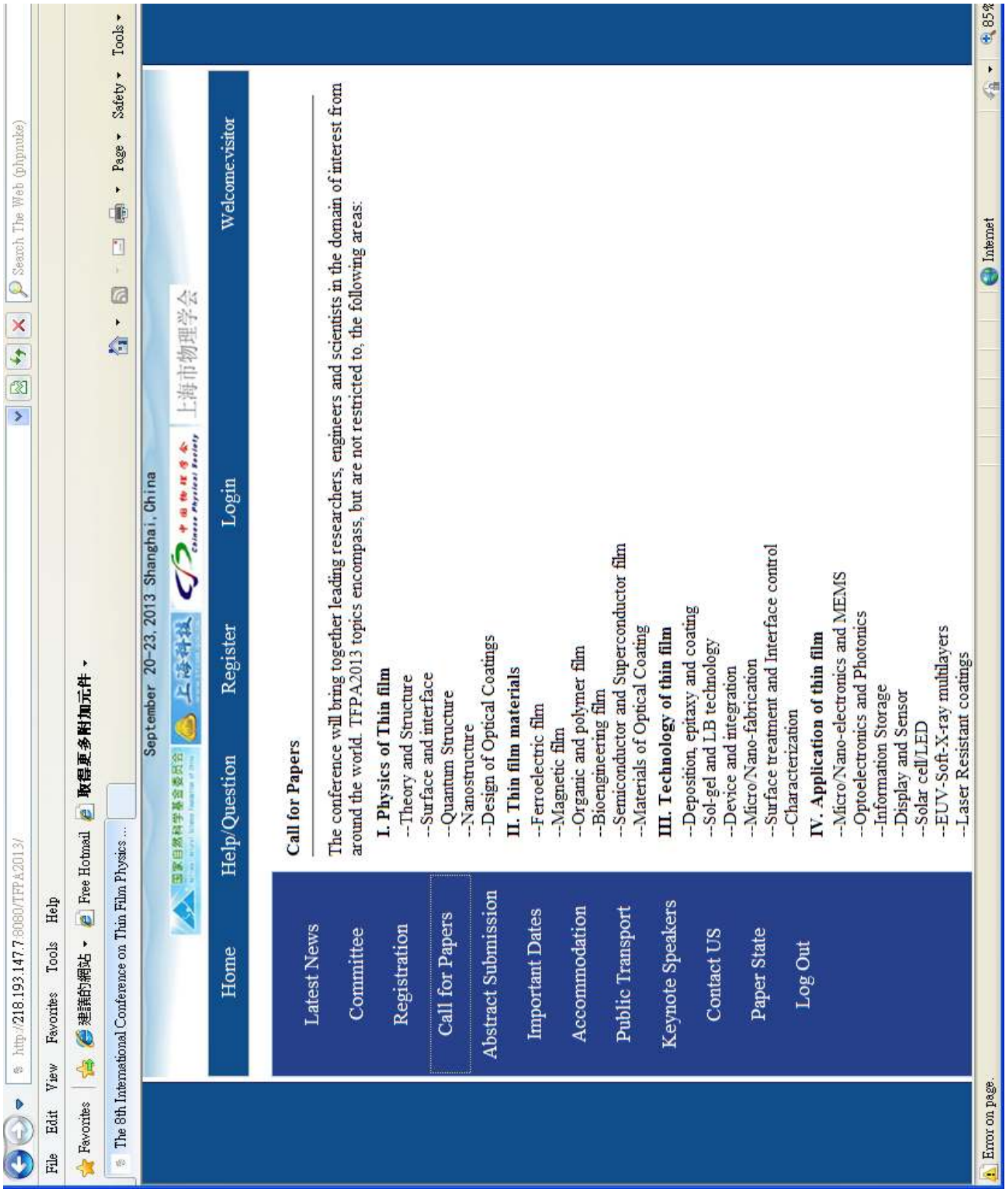
(二) 本所研發之電漿矽薄膜太陽電池，亦可考慮參考 OLED 的想法，將一過渡金屬氧化物配套安插於串疊式矽薄膜太陽電池的上下電池接面，提供載子傳遞的途徑，期能對轉換效率有所幫助。

(三) 本所研發之電漿矽薄膜太陽電池可考慮從李東棟博士的概念，尋找於不鏽鋼基板上生成奈米結構的技術。李東棟博士的奈米粗糙面既已證實可提升短路電流，如能於不鏽鋼基材上製造奈米粗糙面其效果應值得期待。

(四) 本所研發之低發射率隔熱膜的產出(Low-emissivity film, Low-E)亦已應用了電腦輔助設計，而 Tikhonravov 教授所提出的實例更支持了實務搭配電腦設計的可行性。吾人應更加強實務與電腦計算間的應用經驗，開發多樣性產品，與國際潮流接軌，期能蒸蒸日上。


http://218.193.147.7:8080/TFPA2013/
Search The Web (phpnuke)
File Edit View Favorites Tools Help
Favorites
建議的網站
Free Hotmail
取得更多附加元件
The 8th International Conference on Thin Film Physics ...
Page Safety Tools
国家自然科学基金委员会
上海科技
中国物理学会 Chinese Physical Society
上海市物理学会
Home
Help/Question
Register
Login
Welcome:visitor
Latest News
Committee
Registration
Call for Papers
Abstract Submission
Important Dates
Accommodation
Public Transport
Keynote Speakers
Contact US
Paper State
Log Out
The 8th International Conference on THIN FILM PHYSICS AND APPLICATIONS (TFPA2013)
第八届国际薄膜物理与应用会议
September 20-23, 2013 Shanghai, China
We would like to invite you to participate in the 8th International Conference on Thin Film Physics and Applications (TFPA2013) to be held at Shanghai, China during September 20-23.
This conference was sponsored by National Nature Science Foundation of China, Science and Technology Commission of Shanghai Municipality, Chinese Physics Society, and Shanghai Physics Society.
The forum aims to bring together researchers from around the world to report on recent progress in growth, characterization, physics of thin film and applications.
Error on page.
Internet
100%

研討會論文主題


http://218.193.147.7:8080/TFPA2013/
File Edit View Favorites Tools Help
Favorites
建議的網站
Free Hotmail
取得更多附加元件
The 8th International Conference on Thin Film Physics ...
Search The Web (phpmuke)
Page
Safety
Tools
September 20-23, 2013 Shanghai, China
上海市物理学会
Home
Help/Question
Register
Login
Welcome:visitor
Latest News
Committee
Registration
Call for Papers
Abstract Submission
Important Dates
Accommodation
Public Transport
Keynote Speakers
Contact US
Paper State
Log Out
Call for Papers
The conference will bring together leading researchers, engineers and scientists in the domain of interest from around the world. TFPA2013 topics encompass, but are not restricted to, the following areas:
I. Physics of Thin film
--Theory and Structure
--Surface and interface
--Quantum Structure
--Nanostructure
--Design of Optical Coatings
II. Thin film materials
--Ferroelectric film
--Magnetic film
--Organic and polymer film
--Bioengineering film
--Semiconductor and Superconductor film
--Materials of Optical Coating
III. Technology of thin film
--Deposition, epitaxy and coating
--Sol-gel and LB technology
--Device and integration
--Micro/Nano-fabrication
--Surface treatment and Interface control
--Characterization
IV. Application of thin film
--Micro/Nano-electronics and MEMS
--Optoelectronics and Photonics
--Information Storage
--Display and Sensor
--Solar cell/LED
--EUV-Soft-X-ray multilayers
--Laser Resistant coatings
Error on page.
Internet
85%

論文接受函

TFPA2013

September 20-23, Shanghai,
Donghua University, Shanghai, P. R. China

TFPA2013 Secretariat
2999 Renmin North Rd. Songjiang Distrcit, Shanghai,
P. R. China
E-mail:TFPA2013@dhu.edu.cn
Phone：+86-21-67792333
Fax: +86-21-67702085

Shanghai, July 9, 2013

Acceptation Letter

En-Shih Chen,
Institute of Nuclear Energy Research
No. 1000, Wenhua Rd., Jiaan Village, Longtan Township, Taoyuan County, 32546, Taiwan.

Dear Professor Chen,

On behalf of the Organizing Committee TFPA2013, it is a great honor for us to welcome you for 8th International Conference on Thin Film Physics and Application (TFPA 2013) which will be held at Donghua University, Shanghai, P. R. China from September 20 to 23, 2013.

Your abstract has been accepted as follows:
Register No：138036
Type of Presentation: Oral
Abstract title: Examination and simulation of effect Ag_2O content on heat mirror production
Authors: En-Shih Chen, Jin-Yu Wu, Chun-Wei Yang, Shih-Tse Chang, Wei-Sin Lin, Daw-Jean Shang, Ching-Pei Tseng

We look forward to seeing you and your presentation at TFPA2013.

Yours sincerely,

Chunrui Wang
Organizing Committee TFPA2013
Professor, Associated Dean, College of Science,
Donghua University

本研討會之 Agenda 附於本頁之後, 其中職之英文名 Enshih Chen 誤印爲 Enshin Chen。

The 8th International Conference on Thin Film Physics and Applications

TFPA2013

September 20th-23rd, 2013
Shanghai, P. R. China

Sponsors

National Natural Science Foundation of China
Science and Technology Commission of Shanghai Municipality, China
Chinese Physical Society, China
Shanghai Physical Society, China

Organizer

College of Science, Donghua University
State Key Laboratory for Modification of Chemical Fibers and Polymer Materials, Donghua University
Optical Coating and Materials Department, Shanghai Institute of Technical Physics, CAS

Topics

The conference includes invited and contributed papers on the following topics:

1. Physics of Thin Film
2. Thin Film Materials
3. Technology of Thin Film
4. Application of Thin Film

Plenary Speakers

Siva Sivananthan
University of Illinois at Chicago, USA
Artur Zrenner
Universitat Paderborn, Germany

Invited Speakers

Yong Chang, University of Illinois at Chicago, USA
Jianming Dai, Institute of Solid State Physics, CAS, China
Ramesh Dhere, Episolar Inc. USA
Qixin Guo, Saga University, Japan
Jun He, National Central for Nanoscience and Technology, China
Johnny C Ho, City University of Hong Kong, Hong Kong
Zhigao Hu, East China Normal University, China
Anquan Jiang, Fudan University, China
Yang Jiang, Hefei University of Technology, China
Zuimin Jiang, Fudan University, China
Jiansheng Jie, Soochow University, China
Dongdong Li, Shanghai Advanced Research Institute, CAS, China
Lei Liao, Wuhan University, China
Dingquan Liu, Shanghai Institute of Technical Physics, CAS, China
Xingzhao Liu, University of Electronic Science and Technology of China, China
Yongfeng Mei, Fudan University, China
Xiangjian Meng, Shanghai Institute of Technical Physics, CAS, China
Hongseok Oh, Seoul National University, South Korea
Hyung-Ho Park, Yonsei University, South Korea
Guozhen Shen, Institute of Semiconductors, CAS, China
Wenzhong Shen, Shanghai Jiao Tong University, China
Litao Sun, Southeast University, China
Jianxin Tang, Soochow University, China
Alexander Tikhonravov, Moscow State University, Russia
Jiannong Wang,Hong Kong University of Science and Technology, Hong Kong
Yue Wang, Peking University, China
Zhanshan Wang, Tongji University, China
Jinan Xia, Politecnico di Torino, Italy
Shihe Yang, Hong Kong University of Science and Technology, Hong Kong
Gyu-chul Yi, Seoul National University, South Korea
Jie Yu,Harbin Institute of Technology, Shenzhen Graduate School, China
Qinghong Zhang, Donghua University, China

Yong Zhang, University of Western Ontario, Canada
Xuebin Zhu, Institute of Solid State Physics, CAS, China
Jin Zou, University of Queensland, Australia

Conference Chairs

Jie Zhang, Shanghai Jiao Tong University (China)
Junhao Chu, Shanghai Institute of Technical Physics (China) and East China Normal University (China)

International Program Committee

Jie Zhang, Shanghai Jiaotong University (China)
Junhao Chu, Shanghai Institute of Technical Physics (China)
Artur Zrenner, Universitat Paderborn (Germany)
Siva Sivananthan, University of Illinois at Chicago (USA)
Alexander V. Tikhonravov, Moscow State University (Russian Federation)
Yongfeng Mei, Fudan University (China)
Dingquan Liu, Shanghai Institute of Technical Physics (China)
Jiannong Wang, Hong Kong University of Science and Technology (Hong Kong)
Zhanshan Wang, Tongji University (China)
Chunrui Wang, Donghua University (China)
Wenzhong Shen, Shanghai Jiao Tong University (China)
Guozhen Shen, Institute of Semiconductors, CAS (China)
Qixin Guo, Saga University (Japan)
Hyung-Ho Park, Yonsei University (South Korea)
Jin Zou, University of Queensland (Australia)

Organization Committee

Jing Zhang, Chair, Donghua University (China)
Zhanshan Wang, Cochair, Tongji University (China)
Dingquan Liu, Cochair, Shanghai Institute of Technical Physics (China)
Chunrui Wang, Cochair, Donghua University (China)
Xiaoshuang Chen, Shanghai Institute of Technical Physics (China)
Binhe Wu, Donghua University (China)
Huaizhong Xing, Donghua University (China)

Xiaofeng Xu, Donghua University (China)
Shaolin Xue, Donghua University (China)

Conference Secretariat

Ying Guo, Donghua University (China)
Aijiang Lu, Donghua University (China)

Agenda of TFPA2013

	Sept.20th	Sept.21st	Sept.22nd	Sept.23rd
Morning		Opening Ceremony 9:00-9:30 Plenary Session 9:30-11:40	Parallel Sessions 9:00-12:00 I. Physics of Thin Film II. Thin Film Materials III. Technology of Thin Film IV. Application of Thin Film	Self-Tour
Afternoon	Registration 13:00-20:00	Parallel Sessions 13:30-18:05 I. Physics of Thin Film II. Thin Film Materials III. Technology of Thin Film IV. Application of Thin Film Poster：13:00-18:00	Parallel Sessions 13:30-18:00 I. Physics of Thin Film II. Thin Film Materials III. Technology of Thin Film IV. Application of Thin Film Poster：13:00-18:00	
Evening		Welcome Banquet		

Contents

Location

The venue of the TFPA2013 is Donghua University (DHU), formerly China Textile University, was founded in 1951. Located in the downtown area in Shanghai and adjacent to Hongqiao Economic Development Zone, DHU is one of the state-key universities directly under the Ministry of Education of China. Its feature disciplines, such as Fashion Design, Textile Engineering, International Trade, Material Science, and Information Technology have received high reputation both domestically and abroad.

Shanghai, situated on China's east coast, is the country's biggest city and busiest port. It is famous for her prospective industrial and commercial business. The scenery here such as the Bund, Oriental Pearl Tower, Jinmao Building, the Science and Technology Museum and Yuyuan Garden attracts thousands of tourists from all the world. Here, you can feel the fascinating energy of this developing city, at the same time enjoy her charming culture and the most fashionable shopping.

Presentation

Papers will be presented at the conference either in oral or poster sessions. The official language of the conference is English. The oral presentations have been listed in the following Program. All the abstracts can be download from the Official Website.

Organizer will provide the computer and projector for the oral presentations.

Proceedings

All accepted papers will be published in Proceedings of SPIE, which is indexed in EI, INSPEC and other relevant scientific and engineering databases including Web of Science Conference Proceedings Citation Index—Science, Scopus, Chemical Abstracts, and the Harvard-Smithsonian/NASA Astrophysics Data System (ADS).

Registration

The TFPA2013 Registration Desks are located at the main entrance of the Library and Information Center, opening hours:
13:00-20:00, Friday, September 20th, 2013
8:00-16:00, Saturday, September 21st, 2013

Opening Ceremony

Saturday, Sept. 21st

Venue: Hall 2, Library and Information Center

All participants are cordially invited to the opening ceremony

9:00-9:30 Opening Address

Plenary Session

Saturday, Sept. 21st /9:30-10:50/
Room: Hall 2, Library and Information Center

Chair: Junhao Chu
Academician, Shanghai Institute of Technical Physics/ East China Normal University

9:30-10:10
Coherent Optoelectronics with Single Semiconductor Quantum Dots
Artur Zrenner
Universitat Paderborn, Germany

10:10-10:50
Progress in II-VI Based Thin Film Solar Cells and Potential for Future Developments
Siva Sivananthan
University of Illinois at Chicago, United States

10:50-11:10 Coffee Break

Session 1 Physics of Thin Film & Thin Film Materials

Saturday, Sept. 21st /11:10-11:40/
Room: Hall 2, Library and Information Center

Chair: Jiannong Wang
Hong Kong University of Science and Technology, Hong Kong

11:10-11:40
Invited: Growth of Epitaxial III-V Semiconductor Nanowires–Impact of Metallic Catalysts
Jin Zou
University of Queensland, Australia

11:40-13:00 Lunch

Session 1 Physics of Thin Film & Thin Film Materials

Saturday, Sept. 21st /13:30-18:05/

Room: Meeting room 7

Co-Chairs: **Qixin Guo**

Saga University, Japan

Xiangjian Meng

Shanghai Institute of Technical Physics, China

13:30-14:00

Invited: Transport Properties of 3D Topological Insulator Bi_2Te_3 and Bi_2Se_3 Thin Films Grown by Molecular Beam Epitaxy

Jiannong Wang

Hong Kong University of Science and Technology, Hong Kong

14:00-14:30

Invited: The Tunneling Effect in the Solid State Capacitors Based on Ultrathin Ferroelectric Polymer Films

Xiangjian Meng

Shanghai Institute of Technical Physics, China

14:30-14:45

Dependence of Annealing Temperature on Microstructure and Photoelectrical Properties of Vanadium Oxide Thin Films Prepared by DC Reactive Sputtering

Yan Li

Shenzhen University, China

14:45-15:00

Growth and Physical Properties of $Ba_{1-x}La_xSnO_3$ Films Grown on Sapphire Substrates by Sol-Gel Method

Chao Shan

East China Normal University, China

15:00-15:20 Coffee Break

15:20-15:50
Invited: Growth and Characterization of ZnTe Thin Films
Qixin Guo
Saga University, Japan

15:50-16:05
Plasmonic Structures and Metamaterials as Electromagnetic Absorbers
Yanxia Cui
Taiyuan University of Technology, China

16:05-16:20
Point Defects in the Silicon Nanowire
Aijiang Lu
Donghua University, China

16:20-16:50
Invited: Morphology-controlled Van der Waals Epitaxy of ZnO Nanostructures on Hexagonal Boron Nitride
Hongseok Oh (Gyu-chul Yi)
Seoul National University, South Korea

16:50-17:05
Preparation of $CuInSe_2$ Thin Films by Spin-coating and Selenization
Niangjuan Yao
Shanghai Institute of Technical Physics, China

17:05-17:20
Growth of ZnSe-based Longitudinal Twinning Nanowires by Phase Transformation
Jing Xu
Donghua University, China

17:20-17:50

Invited: To be announced

Jun He

National Central for Nanoscience and Techology, China

17:50-18:05

Variable Range Hopping Conduction in Ultrathin Ferroelectric Tunneling Junction

Xiaolin Zhao

Shanghai Institute of Technical Physics, China

Session 2 Technology of Thin Film & Application of Thin Film

Saturday, Sept. 21st /13:30-18:05/

Room: Meeting room 5

Co-Chairs: **Zhanshan Wang**

Tongji University, China

Alexander Tikhonravov

Moscow State University, Russia

13:30-14:00

Invited: Flexible/Transparent Nanowire Thin-Film Transistors

Guozhen Shen

Institute of Semiconductors, China

14:00-14:30

Invited: Amorphous Metal Oxide/Carbon Nanotubes Hybrid Thin-Film Transistors: A New Avenue to High Speed Macroelectronics

Lei Liao

Wuhan University, China

14:30-15:00

Invited: Atomic-Scale Nanofabrication and Dynamic Characterization for Thin Film Research

Litao Sun

Southeast University, China

15:00-15:20 Coffee Break

15:20-15:50

Invited: Challenging Thin Film Applications and Modern Techniques for Optical Coating Design

Alexander Tikhonravov

Moscow State University, Russia

15:50-16:20

Invited: Electrospinning of Nanofibrous Materials: Process and Application

Jie Yu

Harbin Institute of Technology, China

16:20-16:50

Invited: Resistive Switching Characteristics of $R_{1-x}A_xMnO_3$ (R = Pr, La (Gd); A = Ca, Sr) Perovskite Manganite Films for ReRAM

Hyunh-ho Park

Yonsei University, South Korea

16:50-17:20

Invited: Light Management in Thin-Film Amorphous Silicon Solar Cells on Low-cost Nanodent Array Substrates

Dongdong Li

Shanghai Advanced Research Institute, China

17:20-17:50

Invited: Some Methods to Characterize Multilayers Working at the Range from EUV to Hard X-ray

Zhanshan Wang

Tongji University, China

17:50-18:05

Effect of Thickness on Ferromagnetism in Epitaxially Strained $LaCoO_3$ Thin Films Prepared by Simple Polymer Assisted Deposition

Haifeng Liu

University of Electronic Science and Technology of China, China

Session 3 Physics of Thin Film & Thin Film Materials

Sunday, Sept. 22nd /9:00-18:05/

Room: Meeting room 7

Co-Chairs: **Jianxin Tang**

Soochow University, China

Johnny C. Ho

City University of Hong Kong, Hong Kong

9:00-9:30

Invited: Development of Crystalline, High Mobility III-V Nanowire Parallel Array Films for Flexible Electronics

Johnny C. Ho

City University of Hong Kong, Hong Kong

9:30-10:00

Invited: Controllable Fabrication and Modulations on Oxide Nanotube Arrays Toward High Performance Solar Cells

Hong Liu (Wenzhong Shen)

Shanghai Jiao Tong University, China

10:00-10:15

Atmospheric Pressure Glow Discharge Deposition of Thermo-sensitive Poly (N-isopropylacrylamide)

Ming Shao

Donghua University, China

10:15-10:30

Structural, Optical and Electrical Properties of Delafossite $CuGaO_2$ Films Grown by Sol-Gel Method

Meijie Han

Shanghai Dianji University, China

10:30-10:50 Coffee Break

10:50-11:20

Invited: Interface Studies on Charge Injection and Transport in Organic Optoelectronics

Jianxin Tang

Soochow University, China

11:20-11:50

Invited: Current Understanding of the CdS/CdTe Thin Film Solar Cells

Ramesh Dhere

Episolar Inc. USA

11:50-13:00 Lunch

Co-Chairs: **Zhigao Hu**

East China Normal University, China

Zuimin Jiang

Fudan University, China

13:30-14:00

Invited: Controllable Growth of GeSi Quantum Dots and 3D GeSi Quantum Dot Crystals

Zuimin Jiang

Fudan University, China

14:00-14:15

Improved Electric Behaviors of Gol-Gel Derived $Bi_{1-x}La_xFe_{0.92}Mn_{0.08}O_3$ Films for Nonvolatile Ferroelectric Random-Access Memories

Jinzhong Zhang

East China Normal University, China

14:15-14:30

Structural and Electronic Properties of ZnSe/Si Core-Shell Nanowire Heterostructures

Yijie Zeng

Donghua University, China

14:30-15:00
Invited: Growth and Superconductivity of Epitaxial MgB_2 Ultrathin Films
Yue Wang
Peking University, China

15:00-15:20 Coffee Break

15:20-15:50
Invited: A Novel Tool to Discover Phase Transition Characteristics of Perovskite-Type Ferroelectric Oxides: Spectroscopic Ellipsometry
Zhigao Hu
East China Normal University, China

15:50-16:05
$CoFe_2O_4$/PZT Bilayer Grown on (100) $SrTiO_3$ Substrate by PLD
Xiaodong Zhang
Donghua University, China

16:05-16:20
Model for Atomic Layer Deposition on Inner Wall of Rectangular Pipes with Large Length Aspect Ratio
Yuqing Xiong
Lanzhou Institute of Physics, China

16:20-16:35
Carrier Sign Reversal in Amorphous Silicon Ruthenium Thin Films Deposited by Co-sputtering
Anran Guo
University of Electronic Science and Technology of China, China

16:35-16:50
Gd-doped Ga_nN_n (n=6-12) Clusters: A Density Functional Theory Study
Yanbian Fang
Donghua University, China

16:50-17:05
Effects of Post Annealing on Structural, Electrical and Optical Properties of ZnO: Al Thin Films Prepared by RF Magnetron Sputtering
Jianhua Ma
Shanghai Institute of Technical Physics, China

17:05-17:20
The Adhesion of Lead Germanium Telluride Thin Films
Ping Xie
Shanghai Institute of Technical Physics, China

17:20-17:50
Invited: Microring Resonator-Based Optical Sensors on Nanoporous Silicon Films
To be announced (Jinan Xia)
Politecnico di Torino, Italy

17:50-18:05
Vanadium Dioxide Thin Films for Smart Windows: Optical Design and Performance Improvement
Xinfeng He
Donghua University, China

Session 4 Technology of Thin Film & Application of Thin Film

Sunday, Sept. 22nd /9:00-17:50/

Room: Meeting room 5

Co-Chairs: **Xingzhao Liu**

University of Electronic Science and Technology of China, China

Shihe Yang

The Hong Kong University of Science and Technology, Hong Kong

9:00-9:30

Invited: Assembling Nanomaterial Films for Efficient Energy Generation and Storage

Shihe Yang

The Hong Kong University of Science and Technology, Hong Kong

9:30-10:00

Invited: A New Equipment of Pulsed Laser Deposition for the in-situ Growth of Films in High Magnetic Field

Jianming Dai

Institute of Solid State Physics, China

10:00-10:30

Invited: Network Hybrid Films Based on Graphene Nanoplatelets/Tungsten Carbide Nanowires

Yong Zhang

University of Western Ontario, Canada/ Hefei University of Technology, China

10:30-10:50 Coffee Break

10:50-11:20

Invited: Dielectric Thin Films for AlGaN/GaN High-Electron-Mobility Transistors

Xingzhao Liu

University of Electronic Science and Technology of China, China

11:20-11:35

Molybdenum (Mo) Back Contacts for CIGS Solar Cells

Xiaofeng Ma

Shanghai Institute of Technical Physics, Shanghai Center for Photovoltaics, China

11:35-11:50

Examination and Simulation of Effect Ag_2O Content on Heat Mirror Production

Enshin Chen

Institute of Nuclear Energy Research, Taiwan

11:50-13:00 Lunch

Co-Chairs: **Yang Jiang**

Hefei University of Technology, China

Yongfeng Mei

Fudan University, China

Dingquan Liu

Shanghai Institute of Technical Physics, China

13:30-14:00

Invited: From Thin Solid Films to Nanomembranes

Yongfeng Mei

Fudan University, China

14:00-14:30

Invited: Some Grain Growth Mechanisms in Sol-gel Processing for Thin Films

Xuebin Zhu

Institute of Solid State Physics, China

14:30-15:00
Invited: Optical Characteristics of Indium-Tin-Oxide Thin Films by E-beam Evaporation with Ion Beam Assisted Bombard
Dingquan Liu
Shanghai Institute of Technical Physics, China

15:00-15:20 Coffee Break

15:20-15:50
Invited: Solution-processed Thin Film Solar Cells Employing Infrared Quantum Dots
Yang Jiang
Hefei University of Technology, China

15:50-16:20
Invited: TiO_2 Nanorod Films with the Enhanced Performance Photoanodes for Dye-Sensitized Solar Cells
Qinghong Zhang
Donghua University, China

16:20-16:50
Invited: High-efficiency Nanostructure Based Optical Sensors: Device Construction, Performance Evaluation, and Large-scale Integration
Jiansheng Jie
Soochow University, China

16:50-17:20
Invited: Estimation of Nucleus Domain Density in Ferroelectric Thin Films
Anquan Jiang
Fudan University, China

17:20-17:50

Invited: To be announced

Yong Chang

University of Illinois at Chicago, USA

Session 5 Poster Session 1

Saturday, Sept. 21st /13:00-18:00/
Poster Area

5.1 Basal Material Impact on the Deposition of Titanium Nitride Thin Films and Their Properties
Shuying Fu*
138024, Hanshan Normal University, China

5.2 Influence of Laser Irradiating Energy on Optical Properties and Morphology of TiO_2 Films
Fang Guo, Junqi Xu*, Junhong Su, Shaokun Dang
138029, Xi'an Technological University, China

5.3 Optical and Electrical Properties of $Mn_{1.56}Co_{0.96}Ni_{0.48}O_4$ Thin Films
Yanqing Gao*, Z.M. Huang, Y. Hou and J. Wu
138121, Shanghai Institute of Technical Physics, China

5.4 Design of Chirped Mirrors Used for the Dispersion Compensation in Femtosecond Lasers
Chunyan Liao, Junjun Qin, Manli Hu
138123, Northwest University, China

5.5 Effects of Growth Temperature on $Cd_{1-x}Mn_xTe$ Thin Films Deposited by Close-spaced Sublimation
Junnan Wang, Linjun Wang*, Jian Huang, Haitao Xu, Jijun Zhang, Run Xu, Ke Tang, Beiling Yao, Bing Ren, Jun Tao
138086, Shanghai University, China

5.6 The Effect of Annealing Temperature on Resistivity of Indium Tin Oxide Film deposited by Magnetron Sputtering
Junnan Wang, Linjun Wang*, Jian Huang, Haitao Xu, Ke Tang, Beiling Yao, Bing Ren, Jun Tao

138086, Shanghai University, China

5.7 Effects of the Substrate Temperature on the Morphology, Structure and Optical Properties of Nanocrystalline Cu_xS Films

Bing Ren, Jian Huang, Yuelu Zhang, Ke Tang, Lin Wang, Kaifeng Qin, Zhangmin Pan, Linjun Wang* and Yiben Xia
138089, Shanghai University, China

5.8 Thin Film Poly-crystalline Silicon Fabrication Based on Rapid Thermal Annealing (RTA) Process

Jun Qian*, Jirong Li, Yang Liao, Weiming Shi
138090, Shanghai University, China

5.9 Electrical Properties of Polycrystalline Mercuric Iodide Detector

Yang Liao*, Jirong Li, Jun Qian, Weimin Shi, Weiguang Yang and Shuyi Lu
138091, Shanghai University, China

5.10 Nano-composites of ZnO/Graphene for DSSC by Hydrothermal Method

Jie Tan, Yue Shen*, Qiandi Wang, Meng Cao, Feng Gu, Linjun Wang
138092, Shanghai University, China

5.11 Preparation and Properties of Graphene Film on AlN Substrate

Saijie Gao, Feng Gu, Mengjie Xu, Yue Shen*
138093, Shanghai University, China

5.12 Modification and Properties of Colloidal Quantum Dots used in QDSSCs

Zhonglei Feng, Yue Shen*, Meng Cao, Feng Gu, Linjun Wang
138095, Shanghai University, China

5.13 Preparation of Graphene/Polymer Composite Photocathode for QDSSC

Qiandi Wang, Yue Shen*, Jie Tan, Kai Xu, Meng Cao, Feng Gu, Linjun Wang
138083, Shanghai University, China

5.14 Conducting/Semiconducting/Insulating Nanoparticles Incorporation in Poly (3, 4-ethylenedioxythiophene) Poly (styrenesulfonate)
Hong Sub Lee*, Woo Je Han, Hyung-Ho Park
138117, Yonsei University, South Korea

5.15 Organic Semiconductor Thin Film Growth: Effect of the Substrate Surface
Lizhen Huang*, Donghang Yan, Lifeng Chi*
138081, Soochow University, China

5.16 Energy Transfer from CdSe Quantum Dots to Graphene
Chunyan Liao, Zhenhua Ni, Haiming Fan
138123, Northwest University, China

5.17 Study on Structure and Electrical Properties Of 0.7Pb $(Mg_{1/3}Nb_{2/3})O_3$–$0.3PbTiO_3$ Ferroelectric Thin Films Prepared by a Modified Sol-gel Process
Aiyun Liu*, Fangting Lin, Xiangjian Meng, Jinglan Sun, Junhao Chu, Chengbin Jing
138126, Shanghai Normal University, China

5.18 Effects of Thermal Treatment on $Cd_{1-x}Zn_xTe$ Thin Films Deposited by Close-spaced Sublimation
Haitao Xu, Run Xu*, Ye Yuan, Jian Huang, Jijun Zhang, Ke Tang, Linjun Wang
13128, Shanghai University, China

5.19 Polymer Assisted Deposition of Epitaxial $RCoO_3$ (La, Pr, Nd, Sm, Y) Thin Films on $SrTiO_3$ Substrate
Dan Yao, Lei Shi *, Haifeng Liu, Shiming Zhou, Jiyin Zhao

138122**,** University of Science and Technology of China, China

5.20 The Evolution of Polymer Surface Topography in Annealing

Pengfei Ma, Weiguo Liu*, Huan Liu
138034, Xi'an Technological University, China

5.21 Microstructure and Properties of Pyrochlore PZNT Thin Films Prepared by Pulsed laser Deposition

Hailong Han, Aiyun Liu*，Linlin Wei, Chuanqing Li, Fangtin Lin, Wangzhou Shi，Xiangjian Meng，Jinglan Sun，Junhao Chu
138042, Shanghai Normal University, China

5.22 Study on the Fabrication and Releasing of Sacrificial Layer of Micro-cantilever

Liang liu, Weiguo Liu*, Huan Liu
138043, Xi'an Technological University, China

5.23 Large Strain Response in PZT-PZN-PAN Lead-based Ceramics

Linlin Wei, Aiyun Liu*, Hailong Han, Chengchao Jin, Peng Wang, Qingrong Yao, Wangzhou Shi，Feifei Wang，Junhao Chu
138047, Shanghai Normal University, China

5.24 Structural Characterization of Multilayer Using the Analysis Combing GIXRF with GIXRR Method

Xiaoyue Yang, Wenbin Li*, Xiaolong Li, Zhanshan Wang
138048, Tongji University, China

5.25 Study of Hydrogen Incorporation in Chemical Vapour Deposited Diamond Films by Analysis of Infrared Spectroscopic Signal and Elastic Recoil Detection Analysis Measurement

S. L. Tu, Chunjiu Tang*, X. F. Jiang, J. L. Pinto
138129, Changshu Institute of Technology, China

5.26 Two-step Photon Absorption in Intermediate Band Solar Cells Based on ZnTeO

Tooru Tanaka*, Shin Haraguchi, Masaki Miyabara, Katsuhiko Saito, Qixin Guo, Mitsuhiro Nishio, Kin M. Yu, and Wladek Walukiewicz
138120, Saga University, Japan

5.27 UV–visible Spectral Characterization and DFT Simulation Analysis on Laser-induced Crystallization of Amorphous Silicon Thin Films

Lu Huang*, Jing Jin, Jirong Li, Jun Qian, Weimin Shi, Zhijun Yuan, Zechun Cao, Qihong Lou, Guangpu Wei
138020, Shanghai University，China

5.28 Effect of Surface Morphology on Laser-induced Crystallization of Amorphous Silicon Thin Films Deposited by PECVD

Lu Huang*, Jing Jin, Yang Liao, Guohua Wang, Weimin Shi, Zhijun Yuan, Zechun Cao, Qihong Lou, Guangpu Wei
138020, Shanghai University，China

5.29 An Investigation of Passivation Properties of SiN_x-Si Interface by an MIS Model

Jun Wang*, Meijie Han, Haixin Zhu, Xueliang Ma, and Hua Zhang
138025, Shanghai Dianji University, China

5.30 TiO_2 Nanocrystals Coated Rutile Nanorod Microspheres as The Scattering Layers for Dye-sensitized Solar Cells

Mengyu Gao, Hongzhi Wang, Yaogang Li, Qinghong Zhang*
138039, Donghua University，China

5.31 The Photoluminescence and Thermoluminescence Properties of Nanoporous Al_2O_3 Films Processed in Different Annealing Conditions

Ning Xie, Kaidi Ma, Qian Wang
138069, Xinjiang University, China

Session 6 Poster Session 2

Sunday, Sept. 22nd/13:00-18:00/
Poster Area

6.1 Effect of Temperature on Internal Friction of Graphit-iC Graphite-like Carbon Coatings
Zhiyong Zhu*, Wen Shi, Junfeng Yuan, Xiao Li
138125, Shanghai University, China

6.2 First-principles Calculations of $CsMX_3$ (M = Sn, Pb; X = Cl, Br, I)
Ye Yuan, Run Xu*, Linjun Wang, Haitao Xu
138127, Shanghai University, China

6.3 Control Method for Transition Metal Oxides as a Hole-injection Layer for Organic Light-emitting Devices
Weijiang Zhang*, Jie Zhang
138100, Agricultural and Animal Husbandry College of Tibet University, China

6.4 The Observation of Ferromagnetism in Co-doped $BaSnO_3$ Films Prepared by Pulsed Laser Deposition
Peng Zhang, Jianming Dai*, Fuhai Su, Kejun Zhang, Qinzhuang Liu
138038, Institute of Solid State Physics, China

6.5 Fabrication of Flexible Conductive Graphene Thin Films Based on Highly Water-soluble Sulfonated-triazine Non-covalent Functionalized Graphene Sheets
Yu Liu, Shanyi Guang, Hongyao Xu*
138030, Donghua University, China

6.6 Structure, Electronic and Magnetic Properties of $Ge_{99.04}Mn_{0.96}$ Diluted Magnetic Semiconductor Thin Film Prepared by Thermal Evaporation of Mn Doped GeO_2 Ceramic Film under Hydrogen Atmosphere

Chengbin Jing*, Wei Bai, Zhigao Hu, Jing Yang, Pingxiong Yang, Junhao Chu, Aiyun Liu, Fangtin Lin
138041, East China Normal University, China

6.7 CVD Diamond Film Oxidation Resistance Research

Longwei Jing, Xiaoping Wang*, Lijun Wang, Xiufang Pan, Yiqing Sun
Jinye Wang, Hongtao Sun
138052, University of Shanghai for Science and Technology, China

6.8 Synthesis and Field Emission Properties of Graphene

Xiufang Pan, Lijun Wang*, Xiaoping Wang, Longwei Jing, Songkun Li
138052, University of Shanghai for Science and Technology, China

6.9 Co-Sb Thermoelectric Thin Films Prepared by Ion Beam Sputtering

Weifang Fan, Ping Fan*, Zhuanghao Zheng, Yin Zhang, Guangxing Liang, Dongping Zhang, Jingting Luo
138057, Shenzhen University, China

6.10 Growth and Characterization of Sb_2Te_3 Film by Single-step Sputtering Process

Tantan Liu, Hongmei Deng, Pingxiong Yang*, Jun Zhang, Jun He, Lin Sun, Junhao Chu
138063, East China Normal University, China

6.11 The Influence of Annealing Condition on the Properties of the Co-Sb Thermoelectric Thin Films Prepared by Ion Beam Sputtering

Yin Zhang, Ping Fan*, Zhuanghao Zheng, Weifang Fan, Dongping Zhang, Jingting Luo, Guangxing Liang
138064, Shenzhen University, China

6.12 Structural, Morphological and Infrared Detection Properties of Mn-Co-Ni-O Spinel Oxide Films

Wei Zhou, Cheng OuYang, Jing Wu, Yanqing Gao, Zhiming Huang*
138073, Shanghai Institute of Technical Physics, China

6.13 The Influence of Precursor Films on CIGS this Films Prepared by Ion Beam Sputtering Deposition

Jun Zhao, Ping Fan*, Guangxing Liang, Zhuanghao Zheng, Dongping Zhang, Chaoming Chen
138076, Shenzhen University, China

6.14 The Properties of Cu Doped In_2O_3 Thin Films

Huan Wang, Xue Zhong, Fan Ye, Xingmin Cai*, Dongping Zhang, Ping Fan, Jingtin Luo, Zhuanghao Zheng, GuangXing Liang
138080, Shenzhen University, China

6.15 The Dependence of Texture and Electrical Properties of Indium Oxide thin Film on Annealing Temperature

Chao Dong, Fang Cheng, Baojie Zhao, Shengwen Yu*
138119, Shanghai University, China

6.16 Investigation of Se Supply for the Growth of CZTSSe Thin Films for Photovoltaics

Jirong Li*, Jun Qian, Yang Liao, Weimin Shi
138084, Shanghai University, China

6.17 Microstructural Characterization of Bi_2Te_3 Thin Films Prepared by Hot Wall Epitaxy

Jianhua Guo*, Huiyong Deng, Gujin Hu, Xiaonan Li, Guolin Yu, and Ning Dai
138058, Shanghai Institute of Technical Physics, China

6.18 Effect of Plasma Parameters on Etching and Solubility of Polyvinyl Alcohol Films

Shujing Peng*, Yiping Qiu
138059, Liaoning University of Technology, China

6.19 Comparative Study on Hydrophobic Anti-reflective Films From Methyl-Modified Silica Sols and Vapour-phase Silylation

Yuan Liu*, Peng Jin, Jun Wang, Jun Shen, Zhihua Zhang
138066, University of Shanghai for Science and Technology, China

6.20 Fabrication and Performance of Uncooled Infrared Bolometer based on $Mn_{1.56}Co_{0.96}Ni_{0.48}O_4$ Thin Films

Cheng OuYang, Wei Zhou, Jing Wu, Junhao Chu, Zhiming Huang*
138077, Shanghai Institute of Technical Physics, China

6.21 Two Dimensional Numerical Simulation of the Thin Film Coating Flow

Dongfeng Yue*, Zhiyong Liang
138111, Donghua University, China

6.22 New Research Progressing of Surface Modification of Medical 316L Stainless Steels

Lin Xu*, Dechun Ba, Qing Wang
138070, Northeastern University, China

6.23 Study on Growth Optimization and Metallization of AlN Thin Films

Zhen Liu, Bin Zhang and Tao Zhu, Yigang Chen*
138103, Shanghai University, China

6.24 Solution to Wafer Edge Silicon Grass Defect of Deep Trench Process

Jun Guan, Weimin Shi*, Lu Huang, Weiguang Yang, Jin Liu, Meilin Xu
138055, Shanghai University, China

6.25 Rectifying Properties and Colossal Magnetoresistance in La0.9Hf0.1MnO3 /Nb-0.7 wt%-doped SrTiO3 Heterojunction

Lin Wang*, Zhenping Wu, Yucheng Jiang, Bing Ren, Jian Huang, Ke Tang, Wenzhu Zhang, Ju Gao, and Linjun Wang

138075, Shanghai University, China

6.26 Green Synthesis and Photoelectric Properties of Zinc-phthalocyanine Derivative for DSSC

Yaoyi Zhu, Yue Shen*, Zhonglei Feng, Feng Gu, Meng Cao, Linjun Wang

138094, Shanghai University, China

6.27 Super Capacitance Properties of SnO_2 Coated Nickel/Silicon Microchannel Plates

Keshuang Hui, Yiping Zhu, Shaohui Xu, Lianwei Wang* and Paul K Chu

138105, East China Normal University, China

6.28 Characterization of SnO_2/Ni/SiO_2-MCP Anode in Three-dimensional Lithium-ion Battery

Xuefeng Lou, Shaohui Xu, Yiping Zhu, Lianwei Wang* and Paul K Chu

138106, East China Normal University, China

6.29 The Characterization of $CuInSe_2$ Thin Films by a Sequential Processes of Sputtering and Selenization

Jun Zhang, Hongmei Deng, Pingxiong Yang*, Jun He, Tantan Liu, Lin Sun, Junhao Chu

138062, East China Normal University, China

6.30 Research on Laser Precision Ablating of Solar Cell Electrode

Jinfu Gao, Yue Dong, Hongjie Wang

138131, Nankai University, China

6.31 The study of Secondary Electron Collaborative Plasma in the Surface Modification of PET Film

Di Zhang, Ying Guo*, Hongying Zhou, Yuncheng Shi, Shijian Shi, Jing Zhang

138130, Donghua University, China

Work of the Conference Office

Meeting room 4, Library and Information Center
Helpline: +86-13072119855 (C.R.Wang)
+86-13524367463 (Aijiang Lu)

Meals

All participants and guests are invited to have a welcome banquet on Saturday, 21st September at18:30 in Baodu Seafood Restaurant Grand Hotel.

Saturday and Sunday Lunch meals， Sunday supper will be served on 3rd floor of the Second canteen next to the Library and Information Center.

Accommodation

Shanghai Songjiang New Chalon Hotel
No.1501 Meijiabang Road, Songjiang, Shanghai
Tel: 0086-21-3777-3939 Fax: 0086-21-3777-3535

Shanghai Xueyuan Hotel
No.3499 Guangfulin Road, Songjiang District, Shanghai
Tel: 0086-21- 400-787-8888

Maps


A Plane Sketch Map of Songjiang Campus of Donghua University
东华大学松江校区平面示意图
Take Bus 13, 15 to Metro Line 9
North Gate
北大门
North
北
East
East Gate
东大门
Second canteen
TFPA2013
镜
月
湖
富
林
路
龙
腾
人
民
北
路
文
汇
路