



新居禮夫人計畫(MSCA) 經驗分享

Marie Curie Fellow
Prof. Chin-Huai Young

National Taiwan University of Science & Technology
Department of Construction Engineering

University of Nottingham
Department of Architecture & Built Environment

演講時間: 15 分鐘



Key of success:

(1) Connection with the EU universities

Key of success:

(2) Innovative research performance



Invention of Heat Insulation Solar Glass



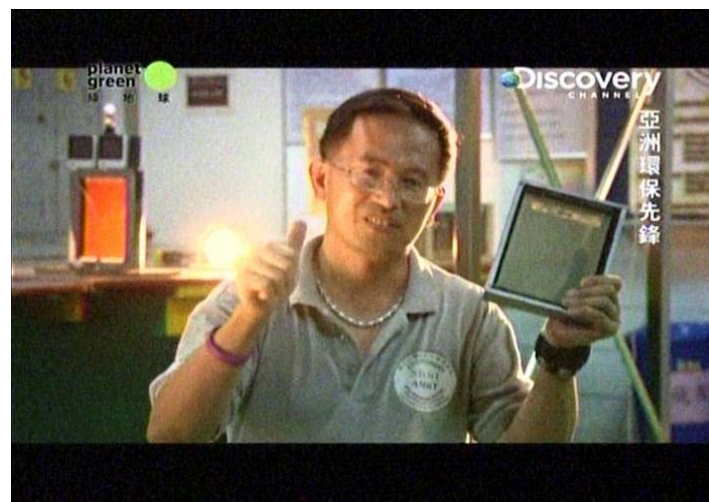
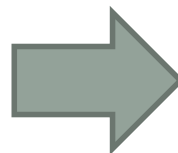
www.hisg.com.tw

young@mail.ntust.edu.tw





教育部國際及兩岸教育交流司



師父引進門

修行在個人

申請科技部
歐盟先期規劃經費補助



University of Nottingham mail
(Expressed interest to my topic)
2011.10



Visited University of Nottingham
(Gave a talk)
2012.06



Application of Marie Curie Project
(by University of Nottingham)
2012.08



Got the award
(Through evaluation)
2012.11



Signed contract
2013.02

Applied Visa
2013



Research progress
(in University of Nottingham)
2014.01 – 2015.12

My process

University of Nottingham mail
(Expressed interest to my topic)
2011.10

From: [Saffa Riffat](#)

Sent: Sunday, June 12, 2011 5:10 PM

To: [young](#)

Cc: ychiou@mail.ntust.edu.tw

Subject: RE: Visit/Collaboration

Dear Professor Young

Many thanks for your e-mail and sending information about your heat insulation solar glass. The work is very interesting and fits well within the research activities of my group. Please let me know if you are interested in a Marie Curie Fellowship. The fellowship is normally for 2 years and you will be based at Nottingham. The salary and the environment are very good.

I look forward to hearing from you.

Regards

Saffa

Professor Saffa Riffat

President of the World Society of Sustainable Energy Technologies (www.wsset.org)

University of Nottingham

申請**科技部歐盟先期規劃**計畫

補助至歐盟申請單位談合作

2012 前往英國諾丁漢大學

Visited University of Nottingham
(Gave a talk)
2012.06



Application of Marie Curie Project
(by University of Nottingham)
2012.08

STARTPAGE

PEOPLE
MARIE CURIE ACTIONS

Incoming International Fellowships (IIF)

Call: FP7-PEOPLE-2012-IIF

PART B

“DHISGLCB”

**Development of Heat Insulation Solar Glass for Low Carbon
Buildings**

Got the award
(Through evaluation)
2012.11

Proposal Evaluation Form



EUROPEAN COMMISSION

7 th Framework Programme for Research

**EVALUATION
SUMMARY
REPORT**

Call :	FP7-PEOPLE-2012-IIF
Funding scheme :	MC-IIF (International Incoming Fellowships (IIF))
Proposal number :	326917
Proposal acronym :	DHISGLCB
Duration (months) :	24
Proposal title :	Development of Heat Insulation Solar Glass for Low Carbon Buildings

information.

- 1- Poor. The criterion is addressed in an inadequate manner, or there are serious inherent weaknesses.
- 2- Fair. While the proposal broadly addresses the criterion, there are significant weaknesses.
- 3- Good. The proposal addresses the criterion well, although improvements would be necessary.
- 4- Very good. The proposal addresses the criterion very well, although certain improvements are still possible.
- 5- Excellent. The proposal successfully addresses all relevant aspects of the criterion in question. Any shortcomings are

研究方法

Criterion 1. S&T QUALITY (award)

Issues to be addressed when assigning an overall mark for this criterion:

- Research/technological quality, including any interdisciplinary and multidisciplinary aspects of the proposal.
- Appropriateness of research methodology and approach.
- Originality and innovative nature of the project, and relationship to the 'state of the art' of research in the field
- Timeliness and relevance of the project
- Host research expertise in the field
- Quality of the group/scientist in charge

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:
(reflecting the relative importance of the strengths and weaknesses above mentioned)
(copy the text above in the comment box)

Strengths:

- *The concept of advanced research on the high efficiency heat insulation solar glass is very well presented in the proposal. The research objectives are clearly outlined against the background of the state-of-the-art and the expected results.*
- *The methodological approach is precisely explained for each objective.*
- *The contribution that the project is expected to make to advance the state-of-the-art within the field of heat insulation solar glass, is demonstrated in the proposal.*
- *There is well-formulated information on the host institution explaining its high level of experience on the research topic of the proposal.*

Weakness:

- *The interdisciplinary aspects of the proposal are not sufficiently outlined in the proposal.*

Overall score (Threshold: 3.00/5.00, Weight: 0.25)

4.20

Criterion 2. TRANSFER OF KNOWLEDGE (award)

Issues to be addressed when assigning an overall mark for this criterion:

- Clarity and quality of the transfer of knowledge objectives
- Potential of transferring knowledge to European host and/or bringing knowledge to Europe

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:

(reflecting the relative importance of the strengths and weaknesses above mentioned)

(copy the text above in the comment box)

Strengths:

- *The project shows a high potential of transferring knowledge to European host and bringing knowledge to Europe.*
- *The transfer of knowledge objectives are described sufficiently.*

知識傳遞

Overall score **4.70**

Criterion 3. RESEARCHER (award)

Issues to be addressed when assigning an overall mark for this criterion:

- Research experience
- Research results including patents, publications, teaching etc
- Independent thinking, leadership qualities, and capacity to transfer knowledge
- Match between the fellow's profile and project

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:

(reflecting the relative importance of the strengths and weaknesses above mentioned)

(copy the text above in the comment box)

Strengths:

- *The comprehensive description of the applicant's experience is presented.*
- *Impressive list of patents is presented with research results including several relevant publications.*
- *Independent thinking and leadership qualities are shown to a sufficiently high degree.*
- *A match between the fellow's profile and project is clearly presented.*

研究人員過去成果

Overall score (Threshold: 4.00/5.00, Weight: 0.25) **4.80**

Criterion 4. IMPLEMENTATION (selection)

Issues to be addressed when assigning an overall mark for this criterion:

- Quality of infrastructure / facilities and International collaborations of host
- Practical arrangements for the implementation and management of the research project*
- Feasibility and credibility of the project, including work plan
- Practical and administrative arrangements, and support for the hosting of the fellow*

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:

(reflecting the relative importance of the strengths and weaknesses above mentioned)

(copy the text above in the comment box)

Strengths:

- *Infrastructure and facilities are of high quality. The host shows a high level of international collaborations.*
- *Practical arrangements for the implementation and management of the research project are sufficiently foreseen.*
- *Feasibility of the project is clearly shown. A detailed work plan is provided.*
- *Practical and administrative arrangements are adequate. Support for the hosting of the fellow is sufficiently demonstrated.*

Weakness:

- *The approach to be taken regarding intellectual property that may arise from the project is not sufficiently described.*

Overall score **4.60**

執行能力

Criterion 5. IMPACT (award)

Issues to be addressed when assigning an overall mark for this criterion:

- Potential for creating long term collaborations and mutually beneficial co-operation between Europe and the other third country
- Contribution to European excellence and European competitiveness through valuable transfer of knowledge
- Impact of the proposed outreach activities*

Strengths:

- *The activities planned have a high potential for creating long term collaborations and mutually beneficial co-operation between Europe and the other country.*
- *The project would contribute to European excellence to a high degree.*
- *The proposed outreach activities are adequate. The proposal provides measurable evidence of the planned outreach activities to promote the research results.*

Weakness:

- *The contribution of the project to European competitiveness is described, however it lacks some details on the involvement of industry.*

Overall score (Threshold: 3.50/5.00, Weight: 0.20) **4.50**

對歐洲之貢獻

Final score

TOTAL SCORE

Total score (Threshold: 70.00/100.00, Weight: 100) 90.90

Signed contract
2013.02

**SEVENTH FRAMEWORK PROGRAMME OF THE
EUROPEAN UNION**

RESEARCH EXECUTIVE AGENCY

SP3-People

**Support for training and career development of researchers
(Marie Curie)**

International Incoming Fellowships (IIF)

FP7-PEOPLE-2012-IIF

Grant Agreement Number 326917

DHISGLCB

**Development of Heat Insulation Solar Glass for Low Carbon
Buildings**

PIIF-GA-2012-326917

A3: Budget

Project Number ¹	326917	Project Acronym ²	DHISGLCB
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One Form per Project

Incoming phase

Type of contract	Category	Applicable mobility allowance	Duration	Host country	Living allowance (1)	Mobility allowance (2)	Contribution to the training expenses of eligible researchers and research/ transfer of knowledge programme expenses (3)	Contribution to overheads (5)	Total EU contribution
A	ER10	1,000.00	24	United Kingdom	235,200.00	32,256.00	19,200.00	22,579.20	309,235.20

Applied Visa
2013

Pass
IELTS
S
5.5

INTERNATIONAL ENGLISH LANGUAGE TESTING SYSTEM

Test Report Form

ACADEMIC

NOTE Admission to undergraduate and post graduate courses should be based on the ACADEMIC Reading and Writing Modules.
GENERAL TRAINING Reading and Writing Modules are not designed to test the full range of language skills required for academic purposes.
It is recommended that the candidate's language ability as indicated in this Test Report Form be re-assessed after two years from the date of the test.

Centre Number TW010 Date 27/JUL/2013 Candidate Number 002416

Candidate Details

Family Name YOUNG

First Name CHIN-HUAI

Candidate ID C120523338



Date of Birth 20/04/1958 Sex (M/F) M Scheme Code Private Candidate

Country or Region of Origin

Country of Nationality TAIWAN

First Language CHINESE

Test Results

Listening 5.0 Reading 5.0 Writing 5.5 Speaking 6.0 Overall Band Score 5.5

Administrator Comments

Centre stamp



Validation stamp



Writing Examiner Number 990558

Administrator's Signature

Yiting

Speaking Examiner Number 994964

Date 08/08/2013

Test Report Form Number

13TW002416YOU010A



UNIVERSITY of CAMBRIDGE
ESOL Examinations

Research progress
(in University of Nottingham)
2014.01 – 2015.12

Development of Heat Insulation Solar Glass for Low Carbon Buildings





UNIVERSITY OF NOTTINGHAM TAIWAN TECH HISG TESTING HOUSE



Jan. 2010 to Dec. 2015 Marie Curie Project in University of Nottingham

- Supervised
2 Ph.D students, 3 MS students, 3 Undergraduates
- Published 4 Journals papers
- Applied one patent
- Applied 3 projects
- Cooperated with 4 industrial companies
- Presented in International conference : 2

Research output

http://web.ntust.edu.tw/~young/marie_curie.htm

Marie Curie Project

Development of Heat Insulation Solar Glass for Low Carbon Buildings (DHISGLCB)

Marie Curie Project

Development of Heat Insulation Solar Glass for Low Carbon Buildings (DHISGLCB)



Prof. Chin-Hual Young
Prof. Saffa B. Riffat
Dr. Erdem Cuce
University of Nottingham
National Taiwan University of Science & Technology



update: 12/15/2015 23:37:25

- [Published Journal Paper 1](#)
- [Published Journal Paper 2](#)
- [Published Journal Paper 3](#)
- [SET 2014 Presentation](#)
- [SET 2015 Presentation](#)
- [SET 2015 Poster](#)
- [SET 2015 Published Paper](#)
- [Application on Creative Homes at University of Nottingham 2014](#)
- [Application on Green House in Taiwan 2015](#)
- [EU publishable report 1 Solar power generation of Heat Insulation Solar Glass on BASF house](#)
- [EU publishable report 2 Development and experimental study of Smart Heat Insulation Solar Glass](#)
- [EU publishable report 3 Energy efficiency simulation and economic assessment of Heat Insulation Solar Glass](#)

Cooperation with ZEDfactory Build ZED in Europe by HISG



Final
Application



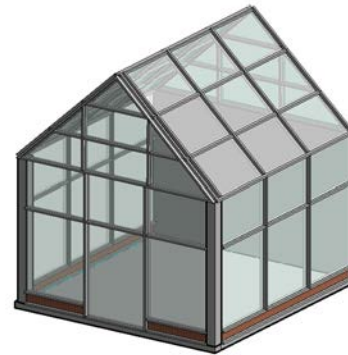
技術應用在歐洲Conservatory (英國工廠洽談)



5000 片訂單



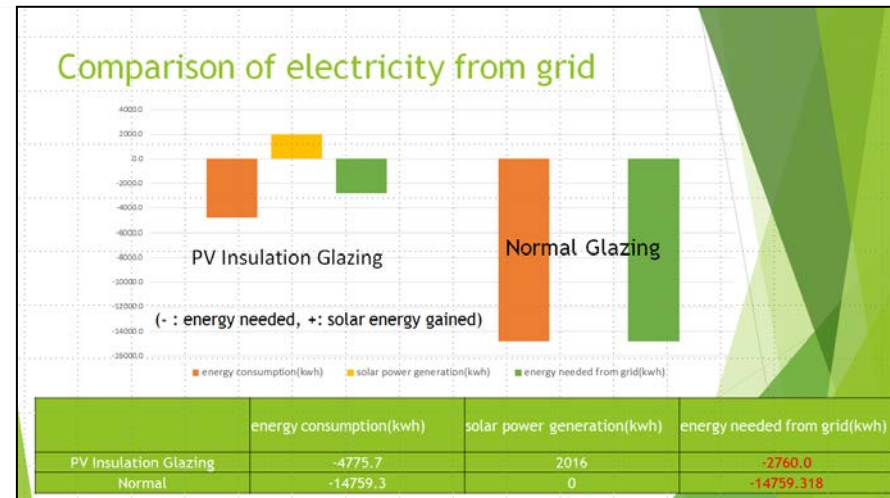
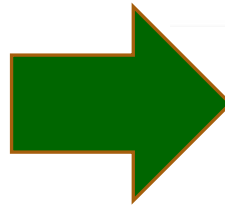
350 US/m²



太陽能+省暖氣



只需傳統電力1/5



開啟歐洲市場

2016.11.02 台科大與葡萄牙建築節能玻璃公司
Vidreira Ideal do Fundao, Lda
簽署太陽能節能玻璃技轉合約
應用在歐洲零耗能建築市場

全國 4 天用電只靠再生能源，葡萄牙擺脫「最髒國」壞印象

作者 地球圖輯隊 | 發布日期 2016 年 05 月 21 日 12:00 | 分類 太陽能, 能源科技 [Follow](#) [G+1](#) [讚](#) [分享](#) < 1,730



陽光空氣水是生命必須三要素，不久的將來人類也能依靠它們維持日常生活用電。葡萄牙近期單單依靠風力等再生能源運作了 4 天，為潔淨能源發電寫下新頁。

NTUST Confidential

Memorandum of Understanding. Meetings will be convened as required and at a venue and time agreed between the Parties.

Each Party shall be responsible for its own expenses incurred in sending representatives to attend review meetings.


4. This Memorandum of Understanding will come into effect on the day on which signed by both Parties. It will continue for a period of 3 months, thereafter this Memorandum of Understanding may be extended for a further period by agreement between both Parties.

Either Party may at any time terminate this Memorandum of Understanding by giving the other Party at least one month's notice in writing. In the event of the expiration or termination of this Memorandum of Understanding, obligations and commitments already agreed upon shall be honored and continued by the Parties until full completion.

This Memorandum of Understanding may be amended and supplemented at any time as decided and agreed by both Parties.

National Taiwan University
of Science and Technology

Vidreira Ideal do Fundao, Lda

By: 
Name: JIANJIAN C. CHEN
Title: Dean of R&D
Date: Oct. 17, 2016

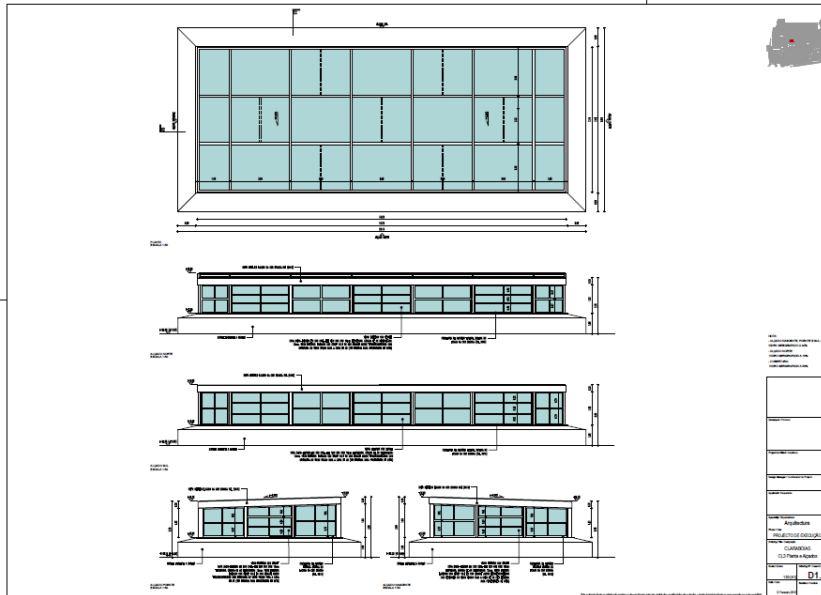
VIDREIRA IDEAL DO FUNDÃO, Lda.
Cruzeamento de Alameda - Apartado 528
8220-006 FUNDÃO
Telf. 475 70 70 - Fax 475 70 281
By: 
Name: Pedro Reborillo
Title: Project Manager
Date: _____

Maintained by TTC

2

Version: 2013.03.11

技術應用在葡萄牙海洋世界



Solar power simulation result
Total solar power: 152975 kWh/year

	CL1		CL2		CL3		CL4		CL5		Total SQM	Total solar power
	Area	kWh	Area	kWh	Area	kWh	Area	kWh	Area	kWh		
Skylight	290	52925	110	20075	133	24273	101	18433	44	8030	687	123735
North	58	3176	25	1369	26	1424	20	1095			129	7063
South	58	5822	25	2509	34	3413	17	1706			134	13450
East					17	1489	17	1489			34	2978
West	30	2464	18	1478	17	1396	5	411			70	5749
Total SQM	444		178		226		160		44		1054	152975

Cooling and heating energy consumption comparison

Heat insulation solar glass

MONTH	HEATING (kWh)	COOLING (kWh)	TOTAL (kWh)
Jan	4377746	0	4377746
Feb	3108588	0	3108588
Mar	3536952	0	3536952
Apr	1989655	0	1989655
May	1091732	0	1091732
Jun	201262	0	201262
Jul	0	379090	379090
Aug	0	397281	397281
Sep	135708	0	135708
Oct	960477	0	960477
Nov	2886810	0	2886810
Dec	3885930	0	3885930
TOTAL	22174860	776371	22951230

Normal glass

MONTH	HEATING (kWh)	COOLING (kWh)	TOTAL (kWh)
Jan	10552422	0	10552422
Feb	7315900	29628	7345528
Mar	5014534	887530	5902064
Apr	4617004	3374662	7991666
May	2755897	6666660	9422556
Jun	843001	9520282	10363283
Jul	173136	11260909	11434045
Aug	192857	9582497	9775354
Sep	850891	6439501	7290392
Oct	2337161	3246859	6084020
Nov	7110462	69214	7179676
Dec	9413170	0	9413170
TOTAL	84676408	5107744	108784152

22951 kWh/year



105754 kWh/year

Got certificate
2015.12



Member
of
MCFA

2015.06



Marie Curie Fellows Association
Certificate of Membership

2015

Awarded to

Chin-Huai Young

Grant Number: 326917

Grant Period: 2014-01-01 – 2015-12-31

Host Institution: University of Nottingham

Host Country: UK

Eric Buchlin

Treasurer of the Association

The Marie Curie Fellows Association is the Association of scientists who have been awarded a Marie Curie fellowship or other individual European Community research grant. The MCFA works to improve the conditions for recipients of European Commission Fellowships, as well as for mobile researchers in the European Community and Associated Countries in general. The MCFA provides advice for Fellows, organizes yearly national meetings for members in individual countries, and works politically on several levels to improve the working conditions for all mobile researchers in Europe. MCFA actively participated in the preparation of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.



The Marie Curie Actions are a collection of funding schemes provided by the European Union, currently through its Framework Programmes for Research and Technological Development. The Marie Curie Fellowships are individual driven actions, which provide an applicant with funding for several years of research. Grants can be awarded to European Union nationals to carry out research at any research institution in the world, as well as to international researchers to join a European research institution. The highly prestigious grants are awarded after a rigorous scientific peer evaluation in a competitive selection procedure.

Visiting Marie Curie Museum

2015
Dec.



吃果子拜樹頭 食米飯敬鋤頭

Conclusion:

- Familiar university in EU
- Innovative knowledge or technology
- Give a talk to the host university

加碼演出



CERTIFICATE OF ATTENDANCE

FOR ERASMUS+ STA MOBILITY

This is to certify that

Mr Chin-Huai Young

from National University of Science and Technology, Taiwan

carried out the mobility activity for teaching

from 15th to 19th of May 2017

as described in Staff Mobility Agreement

at the Faculty of Civil and Environmental Engineering,

Bialystok University of Technology, Poland.

Bialystok, May 19, 2017

VICE-RECTOR
for Educational and International Cooperation
Monika
Prof. Małgorzata Kosińska-Łabęcka, DSc, PhD, Eng

Bialystok University of Technology,
International Relations Office
45A Wiejska Street, 15 – 351 Białystok, POLAND
TEL. + 48 85 746 90 43



Content	Description	hours
Zero Energy Buildings	<ul style="list-style-type: none"> ● Energy issues on buildings ● Definition of Zero Energy Buildings ● Future design of energy efficiency buildings ● Building Integrated Photovoltaics (BIPV) 	2
Solar Energy	<ul style="list-style-type: none"> ● Theory of solar energy ● Solar cell and solar module ● Solar energy system ● Solar energy simulations (Desktop or Laptop required) 	4
Heat Insulation Solar Glass	<ul style="list-style-type: none"> ● Theory, testing and functions ● Demonstrations ● Applications 	2

Bialystok University of Technology



Future contact:

<http://www.hisg.com.tw>

