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# TUNG FENG

香港東區扶輪社週報 THE ROTARY CLUB OF HONG KONG ISLAND EAST

## Last week's Proceedings -

**10th December, 2008**

Before we began our meeting President Andy announced that PDG Raymond Wong had just passed away peacefully last week and Pres. Andy led our members to stand up and make a minute of silent tribute to our beloved PDG Raymond Wong.

Pres. Andy then started the meeting at 1:03 pm by welcoming the guests present, Mr. Eddy Wu from Chiaphua Industries Limited who would be our speaker today and would be formally introduced later, Mr. Anthony Kwong from Wing Cheung Hing Knitters Strawberry Limited, guest of Rtn. Colin Chau and Mr. Eddie Walneck, our incoming Ambassadorial Scholar. They all received a collective applause from us.

Today we celebrated our birthday boy, Rtn. Colin Chau, with the birthday song led by Hon Sec. Heman and a birthday gift presented by Pres. Andy.

PP John Kwok and Rtn. Colin had presented to each of our attending members and guests a Chinese Calendar for 2009 and a set of office gadget respectively.

Pres. Andy then made the following announcements:

### Reminders for Upcoming Activities

Our board meeting of the month will be held on 11th December at PP Paul Chan's office.

On 12 December 2008 Pres. Andy and Dir. Eric Chin will represent our Club to attend the AGM of the Playright organization and to receive recognition for our Club's support to Playright's 'Playful Booklet' project.

The District has organized the Indian Night Fundraising Dinner on 10 Jan 2009 at the India Club. This fundraising is catered for the PolioPlus project.

The District Conference will be held on 21 - 22 February 2009 in Macau.

### News for Club Activities

Pres. Andy then reminded us to register early for attending the upcoming 40th Anniversary of our sister club the Rotary Club of Osaka Jonan from 28th to 31st of May 2009 held in Osaka Japan.

Hon. Treasurer PP Rudy made his report for the Red Box Donation with the amount totaling HK\$1,200.

Then came the highlight of today's meeting with our speaker, Mr. Eddy Wu, being formally introduced by Hon. Sec. Heman for his topic of:

### "What Nano-technology can do to effectively improve indoor air quality?"

The contents were summarized as follows.

Product development on nano-technology used in air purification was triggered by market needs.

Considering global air pollution, China is one of the worst, with 200-230 Urban Air Pollution deaths/million, topping the world, and Hong Kong falls within the region.

Asthmatic children in HK is 10.1 % compared to 9.9 % in Singapore, 4.6 % in Taipei 3.3 % in Beijing and 2.0 % in Guangzhou (SCMP July 9, 1999).

Asthma cases in HK are on the rise: 4.8 % in 1989 to 11.2 % in 1995 and 17.2 % in 2002. Other problems related to air pollution such as children rhinitis 42.4 %, nasal allergy 37.4 %, and wheezing 9.4 %. (Ming Pao August 24, 2002)

What are the common indoor air pollutants in HK? They are:

1. Carbon Dioxide - Tobacco smoke from smoking

2. Volatile Organic Compound (VOC) - cosmetics, pesticide, cleaning agent
3. Formaldehyde from pressed wood products
4. Biological contaminants from people, pets, plants, etc.
5. Respirable suspended particles - PM 10
6. Nitrogen Dioxide, Ozone
7. Radon from building materials.

Indoor air pollution is the major cause of respiratory problems in Hong Kong, based on IAQ survey conducted in Summer 2003.

Based on Environmental Protection Agency (EPA) Report, there are between 40 to 50 million people suffering from allergies of which 17 million are battling with asthma.

Air Cleaners are being positioned as possible solutions for VOC & bacteria which can cause odors / potential health threats.

Indoor air pollution is now our nation's number one environmental health concern- EPA statement to US Senate, '95. EPA suggests that the level of indoor air pollutants may be 2 - 5 times higher than outdoor air pollutant level or much higher during the winter months - EPA, 97.

#### Deficiencies in commonly used Environmental Anti-microbial measures

**Chemical Agents** - effective, must be stringently controlled - EPA IAQ Guidelines for physician

#### **Draw backs:**

1. Chemical generates potential health hazards for the occupants through both airways and dermatological contacts.
2. Ionizing and electrostatic precipitators introduce more airborne charges can potentially create more free radicals, some of which are potential health hazards - US EPA

.Ozone reduces lung function and sensitizes the lungs to other irritants - EPA, FDA & OSHA .

**UV Irradiations** - Effective only under high energy exposure.

#### **Draw backs:**

1. Inactivates E. Coli, Salmonella, Legionnaires takes several seconds, using commercial grade UV lamp. Inactivates mold takes half to 1 minute, using commercial grade UV lamp.
2. Accelerates bacteria photo-reactivation and mutations

#### **Why Photo-Catalytic Oxidation (PCO) technology is being chosen for air purification?**

Because it destroys micro-organisms, bacteria, viruses, removes VOC, and do not produce ozone or other harmful by-product

- HKUST was vetted to be our collaboration partner on coating a nano layer of TiO<sub>2</sub> on surface, with outcome of 12 times more powerful than commercial grade

- 5-7 nano-meter thick layer

- Resistant to scratching by scrubbing

- Attrition resistant

- Dishwasher washable

- Excellent durability

#### Over Brainstorming Sessions, the points have been outlined:

- Fully utilize 360 degree UV light.

- Prolong reaction time in PCO system.

- Simple design and easily cleanable reactor surfaces.

- Allow air in contact with reactor surfaces.

#### Design Concept out of Brainstorming sessions are:

- Put UV lamp in center of cylindrical pipe.

- Force air into cyclone and under UV light all the times.
- Attack tangentially into cyclone to ensure full contact with reactor plates.
- Desktop patent search - design modification cycle
- Patent infringement search and design review
- PCT application and national phase, started with

a.) Coating (US patent filed) and

b.) Air handling (China patent filed)

Performance of design concepts are (laboratory and field) tested and endorsed by Hong Kong University of Science and Technology, while safety approval certified by CSA, UL, CE.

Market Appraisal was then run with the following steps:

- Functionality & Applicability
- Technology & Originality
- Maintenance
- Market Value
- Aesthetics and Easy to use
- Feasibility in manufacturing

### **Marketing Initiatives**

#### **Applications**

- Home, office, clinic, hospital, restroom and etc.

#### **Selling Points**

- Latest PCO technology and washable nano TiO<sub>2</sub> coating
- Remove effectively airborne bacteria
- Air quality Indicator
- Filter replacement indicator and lamp repair indicator
- Easy for DIY maintenance.

#### **Sales Channels**

- HK and China under the brand name of Giabo through
  - a. Direct Sales
  - b. Retailers
  - c. Sales Partners
- Overseas through multi-national distributors
- Model 1500 of 100CFM and Model 2500 of 200CFM for market needs

### **The Product - Cyclonic Photo-Catalytic Oxidation (PCO) Air Purifier**

I. Filtering System (HEPA, Activated Carbon Filter)

II. PCO System

#### **I. Filtering System**

1. Pre-filter
2. True HEPA (99.97% bigger than 0.3micron) filter

3. Activated Carbon filter

4. Anti-bacteria parts

## **II. Cyclonic PCO System**

1. NANO Ti-oxide\* exposed to UV light, PCO drives oxidation and reduction reactions onto the reactor surface to decompose virus, bacteria, fungi and VOC.

2. Cyclonic\* air movement: Cyclonic action prolongs PCO reaction time inside the system

A New PCO Air Purifier was developed in 2006 which is a High Performance Air-purifier with 250cfm. Using nano PCO technology removes 95% VOC's and 97% airborne bacteria with flow through TiO2 Honeycomb Panel and HEPA filter.

This New PCO Air Purifier is a 6+1 filtering System with

1. Pre-filter

2. HEPA 13 filter

3. Activated Carbon Filter

4. UV Light and PCO filter

5. Ionization (optional)

6. Aromatherapy

The PCO filter has Honeycomb Panel design with 3UVC Lamps resulting in VOC's removal per pass 25% and Total Bacteria Count Removal per pass 67% (as tested by HKUST)

There are other PCO Filter Applications such as

1). PCO Filter (with UV) inside air moving appliances

e.g. Mini sized 12VDC/USB Air Purifier

- Humidifier

- Air Conditioner

- Air Cooler

2). PCO Filter using indoor florescent lamps with 10% efficiency, placed at air outlet of

e.g. Air conditioner, air coolers, etc.

The presentation aroused many interested and enthusiastic questions and answers between our members with Mr. Eddy Wu who was later formally thanked by our IPP Laurence Chan for his informative talk.

Meeting adjourned at 2:03 and Pres. Andy Wong proposed a toast to RI, coupled with the Rotary Club of Hong Kong Island East. All members and guests were invited for a group photo followed.

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## **Rotary Potpourri**

### **A new Rotary Club added on the Rotary Map**

According to press release from RI, on 11th August 2008, RI General Secretary Edwin Futa, on behalf of the RI Board, approved a charter for the Rotary Club of Kiritimati, Line Islands, Republic of Kiribati, adding another nation to the more than 200 countries and geographical areas on the Rotary map. District Governor Jack Davies of District 9220 presented the Rotary Club of Kiritimati charter certificate to club president Ruta Uatiao,

The 35-member club headed by President Ruta Uatiao, along with guest Rotarians from District 9920 and the United States, held its first official club meeting on 23rd August 2008, the kick off to the weeklong festivities. As part of the week's programming, Kiritimati club members visited schools and hospitals to assess potential projects.

Kiribati (pronounced KEER-ah-bhass) consists of 33 islands scattered across 2,400 miles of the Pacific Ocean, with a population of more than 105,000. The three main groupings are the Gilbert Islands, Phoenix Islands and Line Islands.

Kiribati gets a large portion of its income from overseas, including fishing licenses, development assistance and tourism.

Welcome Rotary Club of Kiritimati, Line Islands, Republic of Kiribati to this big Rotary family.

There are many Rotary clubs chartered worldwide every month and we choose to name the Miritimati Club because it is from an island nation.

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## Electronic Make-up Questions

**You can submit an electronic makeup for this missed meeting by answering the following questions:**

Name:

Email:

1. Who did we make a silent tribute to before the meeting ? Ans)
2. Who were our visiting guests today ? Ans)
3. Who was our birthday boy today ? Ans)
4. Who presented small gifts to our members at the meeting ? Ans)
5. When will our sister club of Osaka Jonan's 40th Anniversary be held in 2009 ? Ans)
6. How much we have collected for the Red Box ? Ans)
7. Who was our speaker today and what was the topic about ? Ans)
8. On 11 August 2008 a new Rotary Club was approved by RI, What was its name? Ans)

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## Joke

**Subject: Make sense?**

If you don't read the newspaper you are uninformed; if you do read the newspaper you are misinformed. -Mark Twain

Suppose you were an idiot. And suppose you were a member of Congress... .... But then I repeat myself. -Mark Twain

I contend that for a nation to try to tax itself into prosperity is like a man standing in a bucket and trying to lift himself up by the handle. -Winston Churchill

Foreign aid might be defined as a transfer of money from poor people in rich countries to rich people in poor countries - Douglas Casey,

Giving money and power to government is like giving whiskey and car keys to teenage boys. -P.J. O'Rourke, Civil Libertarian

Government's view of the economy could be summed up in a few short phrases: If it moves, tax it. If it keeps moving regulate it. And if it stops moving, subsidize it. -Ronald Reagan (1986)

I don't make jokes... I just watch the government and report the facts. -Will Rogers

If you think health care is expensive now, wait until you see what it costs when it's free! - P.J. O'Rourke

Just because you do not take an interest in politics doesn't mean politics won't take an interest in you! -Pericles (430 B.C.)

There is no distinctly Native American criminal class...save congress. -Mark Twain

What this country needs are more unemployed politicians. -Edward Langley, Artist (1928 -1995)

A government big enough to give you everything you want, is strong enough to take everything you have. -Thomas Jefferson

# Photographs of our meeting

on

10th December, 2008



(L to R) PDG Ulnee Peter, guest speaker - Eddy Wu & Pres. Andy Wong



(L to R) Hon. Sec. Heman Lam & PE Norman Lee



(L to R) PP Henry Chan, PP Rudy Law & Ambassadorial Scholar - Eddie Walneck



(L to R) PP Stephen Liu & Rtn. Tony Loy



(L to R) PP Eddy Wong, Rtn Kenny Chan & Rtn. John Yao



Rtn. Peter Yeung, guest visitor - Anthony Kwong & Rtn. Colin Chau



Pres. Andy presented a birthday gift to Rtn. Colin Chau. Hon. Sec. Heman led the birthday song.



Hon. Sec Heman Lam introduced the speaker - Eddy Wu and his talk to the members





This week's speaker - Eddy Wu



On behalf of the club, IPP Laurence gave a vote of thanks to Eddy Wu



Group photo with members & visitors

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