# 2015 PKU-UTokyo Summer Camp

## **General information**

This year's Summer Camp will bring together 40 participants, including 15 (5 faculty members and 10 graduate students) from PKU, and 25 (15 faculty members + 10 students) from UTokyo. For a week time, participants will intensively discuss recent progress in Nano-carbon research, and propose potential collaborations between PKU and UTokyo.

On 21<sup>st</sup>, we will hold a one day workshop where representatives from both sides will give lectures on their recent results related to nano-carbon research. All participants are suggested to attend.

From 22<sup>nd</sup>, student participants will be divided into 5 teams for independent work and discussion. Each team will propose a potential collaborative research direction between PKU and UTokyo. To help everybody know each other, a selfintroduction session will be held, and all students give a 5 min presentation including brief introduction of themselves and their research.

After intensive work and discussion, students give their final report and presentation on 24<sup>th</sup>.

The official language of summer camp is English.

## Notes:

Participants from PKU *must* give your boarding pass to our staff at the registration. Please send a scanned copy of the boarding pass for your return flight.

The dress code for the Camp is casual; you do not need any formal clothing.

Summers in Tokyo are fairly hot and humid, expecting temperature is 25-30°C, and it may rain.

#### Contacts:

Email: maruyama (at) photon.t.u-tokyo.ac.jp (Prof. Shigeo Maruyama) xiangrong (at) photon.t.u-tokyo.ac.jp (Assistant Prof. Rong Xiang)

TEL: <Mon.-Fri. worktime> Maruyama office: +81-3-5841- 6421 Prof. Shigeo Maruyama <Afterwork time> Rong Xiang

Facilitators:

Hua An (安华): anhua (at) photon.t.u-tokyo.ac.jp Xiao Chen (陈啸): chen (at) photon.t.u-tokyo.ac.jp Kehang Cui(崔可航): cui (at) photon.t.u-tokyo.ac.jp

Students

Professors

## Program for PKU-UTokyo summer camp

	8 am	9	10	11	12	1 pm	2	3	4	5	6	7	8	9
July 20 (Mon.)						Students' arrival, CA181 (An Hua) Hotel check in <sup>1 access to hotel</sup> Registration and reception <sup>2 access to UT</sup> @ 2-31A			(X Ho	arrival, CA167 Gang Rong) otel check in Forest Hongo				
July 21 (Tues.)		Workshop of PKU- UTokyo <sup>3 program</sup> @ 2-31A			Lunch a discussi (Lunchb provide	ion box	Workshop of PKU-UTokyo @ 2-31A				Banquet @ Restaurant ABREUVOIR <sup>4</sup> place information			
July 22 (Wed.)		Student presentation <sup>5</sup> (Inoue) @ 2-301 Lab tour for professors <sup>7</sup> (Maruyama)			Lunch a discussi	ind	Lab tour for students & Group working <sup>6</sup> (Inoue) @ 2-301 Professor meeting (if needed)				Group working @ 2-301 (If needed) <sup>8 Internet information</sup>			
July 23 (Thur.)		Group working @ 2-73C2 (Kehang) Professor meeting (if needed)			Lunch a discussi		Group working @ 2-73C2 (Kehang) Professor meeting (if needed)				Group working @ 2-73C2 (If needed)			
July 24 (Fri.)		Ueno	rning tour to Ueno Park Chen Xiao) Lunch and discu Group working @ (if needed)			g @ 2-31	Discuss			sion, dinner,		Awa	ary and ards ·31A	
July 25 (Sat.)		Visits & Discussions												
July 26 (Sun.)		Departure to Beijing, CA182 (An Hua)												

\*All activities except Banquet are held in engineering building 2; Room 2-31A, 2-301 are on 3rd floor, and 2-73C2 is on 7th floor.

Both

## 1. Hotel for students

Hotel information: http://www.tokyustay.co.jp/e/hotel/SUI/

Hotel name: Tokyu Stay Suidobashi Address: 1-1-12 Misaki-cho, Chiyodaku, Tokyo, 101-0061 Phone number: 03-3293-0109 Check-in date: 2015-07-20 (Mon.) Check-out date: 2015-07-26 (Sun.)

Check scheduled time: 18:00←It is possible from 13:00 p.m. Type of room: single A semi double bed-non-smoking 15 square meter x 1 room Free Internet access equipped with washing drying machine with Simmons's bed Capacity per room per person (adult 1)

## 2. Access to UTokyo, Engineering Building #2

Students are recommended to walk (20 min) from hotel to UTokyo. It is a good exercise. Taking subway (Mita line 三田線) for only one stop from Suidoubashi (水道橋) to Kasuga (春日) is not always more convenient.



Maruyama Chiashi Lab. in Engineering Building 2, Office room number 63C2 Registration at 3<sup>rd</sup> floor, room number 2-31A





# NanoCarbon Workshop of PKU-UTokyo

## July 21 (Tuesday), 2015 9:25-18:00

Engineering Building II, 3rd Floor, **Conference room 31A**, 7-3-1 Bunkyo-ku, Tokyo 113-8656, The University of Tokyo

## Co-Chairs: Shigeo Maruyama and Zhongfan Liu

PKU-UTokyo Joint Research Center of Excellence for Nanocarbons is established to promote collaborative research for nanocarbons (fullerene, nanotubes, and graphene) and exchange of graduate students and young researchers.

## Program

## 9:25 **Opening**

- 9:30 **Zhongfan Liu** (PKU): Controlling synthesis of 2-D nanocarbons: From graphene to graphdiyne
- 10:00 Tatsuya Okubo (UTokyo): Nanoporous materials as host of nanomaterials
- 10:20 **Shohei Chiashi** (UTokyo): Synthesis and applications of horizontallyaligned single-walled carbon nanotubes

10:35-10:50 Break

- 10:50 **Jin Zhang** (PKU): Growth of High Density SWNTs Array on Surface using Trojan Catalysts
- 11:20 Shinji Yamashita (UTokyo): Short-pulse fiber lasers using carbon nanotube and graphene

11:40 Kosuke Nagashio (UTokyo) : Layer-by-layer dielectric breakdown of

hexagonal boron nitride

#### 12:00-13:20 Lunch & Discussion

- 13:20 Yutaka Matsuo (UTokyo): Functionalization of Fullerenes for Organic Solar Cells Application
- 13:40 **Rong Xiang** (UTokyo): Synthesis of small-diameter SWNTs and mechanism investigation by in-plane TEM
- 13:55 Yan Li (PKU): Chirality selective growth of single-walled carbon nanotubes
- 14:25 Yasushi Shibuta (UTokyo): Atomistic-scale simulation of carbon nanotube growth
- 14:45 Yuichiro Kato (UTokyo): Single-carbon-nanotube photonics and optoelectronics
- 15:05 Anyuan Cao (PKU): Carbon Nanotube Sponges

#### 15:35-16:00 Break

- 16:00 **Shigeo Maruyama** (UTokyo): Carbon nanotubes and graphene for solar cell application
- 16:20 Lianmao Peng (PKU): Light emission and detection with carbon nanotubes
- 16:50 **Reo Kometani** (UTokyo): Performance enhancement of graphene mechanical resonator for high-sensitivity sensing
- 17:05 Ryo Shimano (UTokyo): Quantum Faraday effect in graphene
- 17:25 Short talks by young faculties

Kehang Cui (UTokyo), Pei Zhao (Zhejiang University), Xiao Chen (UTokyo), Taiki Inoue (UTokyo), Ahmed Shawky (UTokyo)

17:50 Closing

19:00 Reception at Abreuvoir

## 4. Banquet information

Everybody (both faculties and students) from PKU and UTokyo is invited to banquet.

Banquet: July 21, 19:00-21:00 Restaurant ABREUVOIR The University of Tokyo, Yayoi Campus, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113-0032 Japan TEL 03-5805-2505 FAX 03-5805-2565 http://www.u-tokyo.ac.jp/campusmap/cam01\_00\_30\_j.html

#### **!!Important!!**

Due to fund regulation in Japan, unfortunately, all participants must share the cost for the drinks (Food is covered).

We will collect money at end of Banquet

Professor: 2000 yen

Student: 1000 yen



#### 5. Students presentation

All the student participants from both PKU and UT side will be asked to give a 5 min presentation including your self-introduction and research direction. Please prepare PowerPoint file and test its functioning before the presentation (22nd)

#### 6. Grouping

You are suggested to form 5 team x 4 people. In general, please make teams freely, but each team is suggested to have 2 PKU students and 2 UT students. A team with all Chinese is not allowed.

### 7. Lab tours

We will visit Okubo-lab @ Chemical System Engineering <u>http://www.zeolite.t.u-tokyo.ac.jp/</u> Place: 5B07 (工学部 3 号館) Contact: Zhendong Liu (シャンドン リュー) Keoh Sye Hoe (キョー・サイ・ホー) 5 階につきましたら、内線 27368 に連絡下さい

Kato-lab @ Institute of Engineering Innovation:

http://ykkato.t.u-tokyo.ac.jp/index.en.html

Place: 407(工学部9号館) Contact: (AM)加藤 雄一郎 内21820 (PM)東出 紀之 内27702

#### Kometani-lab @ Mech. Engineering

<u>http://www.nanome.t.u-tokyo.ac.jp/</u> Place: B11C1(工学部 2 号館)

Contact: 前田 悦男, 内 26336, 21639

#### Maruyama-lab @ Mech. Engineering

<u>http://www.photon.t.u-tokyo.ac.jp/</u> Place: B11A1(工学部 2 号館) Contact: Keigo Otsuka,内 26408 Details:

Professors (Attended by S. Maruyama) 9:30-10:15 Maruyama-Chiashi Lab. 10:15-10:30 Transfer 10:30-11:00 Okubo Lab. 11:00-11:15 Transfer 11:15-11:45 Kato Lab.

Students Group A (Attended by Hua An)	Students Group B (Attended by Il Jeon)
13:30-14:00 Maruyama-Chiashi Lab.	13:30-14:00 Okubo Lab.
14:00-14:30 Kometani Lab.	14:00-14:15 Transfer
14:30-14:45 Transfer	14:15-14:45 Kato Lab.
14:45-15:15 Okubo Lab.	14:45-15:00 Transfer
15:15-15:30 Transfer	15:00-15:30 Maruyama-Chiashi Lab.
15:30-16:00 Kato Lab.	15:30-16:00 Kometani Lab.

#### 8. Internet

All participants from PKU side will be provided by a guest account for wifi access in UT at registration.

Participants from UT side please use your own wifi access (utroam, istmember, etc.) and please do NOT share your account with our visitors (due to the recent network attack to UT known in newspapers, UT is now very sensitive to the security issue).

## 9. Final presentation

- $\checkmark$  Each team proposes a potential collaborative project between PKU and UT
- $\checkmark$  Topic should be related but not limited to Nano-carbon research
- ✓ Each team gives a 10 min presentation on their proposal. (10 min talk + 5 min Q&A)
- ✓ All members of a team need to present, and the contributions of each member need to be clarified at beginning of the presentation.
- ✓ Each team needs to submit one page summary (format not limited), as well as their presentation PowerPoint for final score.

## 10. Participant list

	10. Participant list								
	Name Name in 🦉		Affiliation	Position	e-mail				
1	Zhongfan Liu 刘 忠范		Peking University	Professor	zfliu(at)pku.edu.cn				
2	Lianmao Peng	彭 练茅	Peking University	Professor	lmpeng(at)pku.edu.cn				
3	Jin Zhang	张锦	Peking University	Professor	jinzhang(at)pku.edu.cn				
4	Yan Li	李 彦	Peking University	Professor	yanli(at)pku.edu.cn				
5	Anyuan Cao	曹 安源	Peking University	Professor	anyuan(at)pku.edu.cn				
6	Shigeo Maruyama	丸山 茂夫	The University of Tokyo	Professor	maruyama(at)photon.t.u-Tokyo.ac.jp				
7	Tatsuya Okubo	大久保 達也	The University of Tokyo	Professor	okubo(at)chemsys.t.u-tokyo.ac.jp				
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12	Kosuke Nagashio	長汐 晃輔	The University of Tokyo	Associate professor	nagashio(at)material.t.u-tokyo.ac.jp				
13	Yuichiro Kato	加藤 雄一郎	The University of Tokyo	Associate professor	ykato(at)sogo.t.u-tokyo.ac.jp				
14	Reo Kometani	米谷 玲皇	The University of Tokyo	Lecturer	kometani(at)mech.t.u-tokyo.ac.jp				
15	Shohei Chiashi	千足 昇平	The University of Tokyo	Lecturer	chiashi(at)photon.t.u-tokyo.ac.jp				
16	Rong Xiang	项 荣	The University of Tokyo	Assistant professor	xiangrong(at)photon.t.u-tokyo.ac.jp				
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18	Xiao Chen	陈 啸	The University of Tokyo	Postdoc.	chen(at)photon.t.u-tokyo.ac.jp				
19	Kehang Cui	崔 可航	The University of Tokyo	Postdoc	cui(at)photon.t.u-tokyo.ac.jp				
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23	Wenjing Xu	徐 文静	Peking University	Graduate student	jingwenxu2013(at)pku.edu.cn				
24	Dan Liu	刘 丹	Peking University	Graduate student	liudan-cnc(at)pku.edu.cn				
25	Yingjun Yang	杨 英君	Peking University	Graduate student	yangyingjun(at)pku.edu.cn				
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40 41	Goran Kovacevic Takeshi Okochi	- 大河内 健	The University of Tokyo The University of Tokyo	Graduate student Graduate student	gorank(at)cntp.t.u-tokyo.ac.jp okochi (at)photon.t.u-tokyo.ac.jp				

#### Organized by

- PKU-UTokyo Joint Research Center of Excellence for Nanocarbons UTokyo HP: <u>http://www.photon.t.u-tokyo.ac.jp/~maruyama/PKU-UTokyo/PKU-UTokyo.html</u> PKU HP: <u>http://www.chem.pku.edu.cn/page/liy/spectre/jrcoe/</u>
- UTokyo Graduate Program for Mechanical Systems Innovation (GMSI)

#### Sponsored by

- > Top Global Program at UTokyo
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- > The Fullerenes and Nanotubes Research Society,
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