
공무국외여행 보고서

출장기간 : 2019.7.1. ~ 7.5. (4박 5일)

출 장 지 : 일본 오키나와

출 장 자 : 이재근, 문충만

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출장 개요

1. 출장목적

- 학회 참석(2nd International Conference on Green Energy and Environment Engineering) 및 발표
- 국외 선진 사례 등 검토
- 국내 및 대전 적용가능성 검토

2. 출장기간 : 2019.7.1. ~ 2019.7.5. (4박5일)

3. 출 장 지 : 일본 오키나와

4. 출 장 자 : 이재근, 문충만

II

출장 일정

문충만

일자	장 소	교통편	시간	세 부 일 정
7.1	인천/ 오키나와	항공 (OZ172)	09:45~11:55	◦ 인천공항 → 일본 오키나와 ◦ 오키나와 도착 및 학교 방문
7.2	오키나와	모노레일	9:00~18:00	◦ 학회 등록
7.3	오키나와	모노레일	9:00~18:00	◦ 학회 참석 및 발표
7.4	오키나와	모노레일	9:00~18:00	◦ 학회 참석
7.5	오키나와/ 인천	항공 (OZ171)	13:00~15:25	◦ 오키나와~인천

이재근

일자	장 소	교통편	시간	세 부 일 정
7.2	인천/ 오кина와	항공 KE745	10:45~13:00	<ul style="list-style-type: none"> ◦ 인천공항 → 일본 오кина와 ◦ 오кина와 도착 및 등록
7.3	오кина와	모노레일	9:00~18:00	◦ 학회 참석 및 발표
7.4	오кина와/ 인천	항공 KE736	19:05~21:35	◦ 오кина와~인천

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출장 내용

1. 학회소개

- Green Energy와 Environment Engineering 관련 전세계 연구자간 정보 공유 및 플랫폼 제공을 위해 학회 설립
- 2018년 8월 일본 삿포로 Kitahiroshima에서 시작됨
- 이번 학회는 중국, 일본, 한국, 대만, 말레이시아를 비롯한 아시아 국가들과 영국, 이집트, 남아프리카 공화국 등의 유럽과 아프리카 국가 일부가 참여하였음



2. 학회 일정

2019 HKCBEEES OKINAWA CONFERENCE

Brief Schedule for Conference

Day 1	July 2 (Tuesday) 10:00-17:00 Venue: Mercure Okinawa Naha(Lobby) (Add: 3-3-19 Tsubogawa, Naha, Okinawa, 900-0025, Japan) Participants Onsite Registration & Conference Materials Collection & Conference Reports	
	July 3 (Wednesday) 09:15-18:30 Venue: Pacific (2nd floor) (Add: 3-3-19 Tsubogawa, Naha, Okinawa, 900-0025, Japan) Participants Onsite Registration & Conference Materials Collection & Conference Reports	
Day 2	Opening Remarks 09:15-09:20 Prof. Miwako Hosoda Seisa University, Tokyo, Japan Keynote Speech I 09:20-10:05 Topic: 'Low-cost Approaches for Achieving Highly Efficient and Stable Solar Cells' (Prof. Wallace C.H. Choy, Hong Kong University, Hong Kong)	
	Keynote Speech II 10:05-10:50 Topic: 'How to Conserve Our Soil Resources from Contamination of Toxic Substances' (Prof. Kokyo Oh, Center for Environmental Science in Saitama, Japan)	
	Coffee Break & Group Photo Taking 10:50-11:15	
	Keynote Speech III 11:15-12:00 Topic: 'Condition of a Sustainable Coexistence between People and Nature' (Prof. Miwako Hosoda, Seisa University, Tokyo, Japan)	
	Lunch 12:00-13:30 Venue: BISTRO de La mer(1st floor)	
	<table border="0"> <tr> <td> Session 1 13:30-15:30 Venue: Pacific (2nd floor) 8 presentations-Topic: "Wastewater Treatment and Bioremediation" Session Chair: Prof. Kokyo Oh </td> <td> Session 2 13:30-15:30 Venue: Atlantic (2nd floor) 8 presentations-Topic: "Waste Recycling and Renewable Energy" Session Chair: Prof. Miwako Hosoda </td> </tr> </table>	Session 1 13:30-15:30 Venue: Pacific (2nd floor) 8 presentations-Topic: "Wastewater Treatment and Bioremediation" Session Chair: Prof. Kokyo Oh
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Coffee Break 15:30-15:45	
Session 3 15:45-17:30 Venue: Pacific (2nd floor) 7 presentations-Topic: "Nanomaterials and Battery Technology" Session Chair: Prof. Wallace C.H. Choy	Session 4 15:45-17:45 Venue: Atlantic (2nd floor) 8 presentations-Topic: "Pollution Control and Emission Reduction" Session Chair: Prof. Djokorda Gde Tirta Nindhia
Poster Session 1: 17:30-18:30 Venue: Pacific (2nd floor) 11 presentations-Topic: "Energy Technology and Bioengineering" Session Chair: Prof. Kokyo Oh	Poster Session 2: 17:45-18:30 Venue: Atlantic (2nd floor) 9 presentations-Topic: "Environmental Pollution and Prevention" Session Chair: Prof. Miwako Hosoda
Dinner 18:30 Venue: BISTRO de La mer(1st floor)	
July 4 (Thursday) 09:00-12:15 Venue: Pacific (2nd floor) Participants Oral Presentations	
Session 5 09:00-10:30 Venue: Pacific (2nd floor) 6 presentations-Topic: "Bioinformatics and Phytochemistry" Session Chair: Assoc. Prof. Worawan Ongkrutraksa	
Coffee Break 10:30-10:45	
Session 6 10:45-12:15 Venue: Pacific (2nd floor) 6 presentations-Topic: "Environmental Management and Satellite Applications" Session Chair: Prof. Wallace C.H. Choy	
Lunch 12:15 Venue: BISTRO de La mer(1st floor)	
Day 4 July 5, 2019(Friday) 07:30-17:00 One Day Tour	

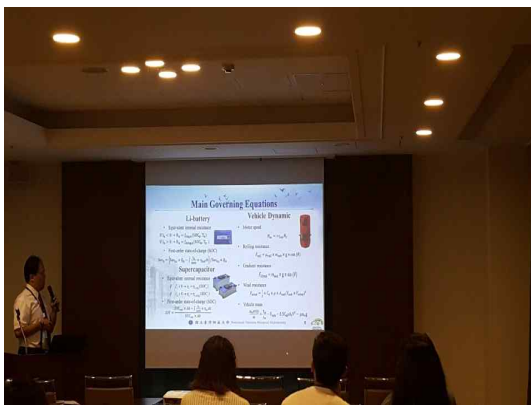
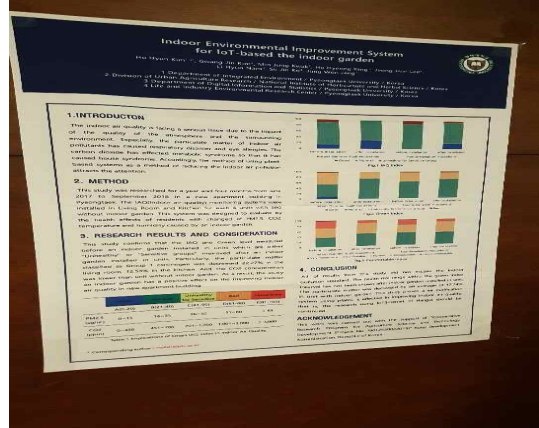
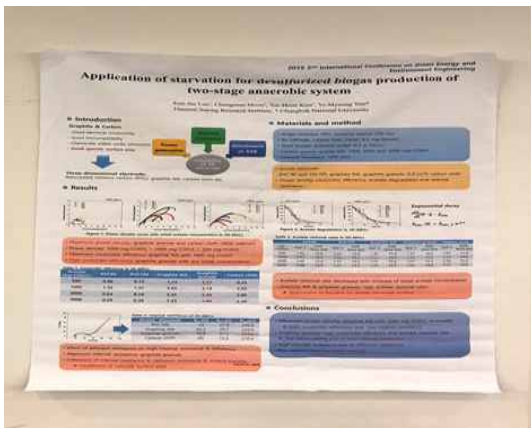
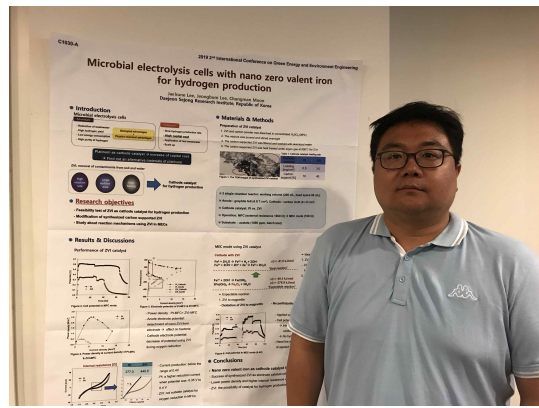
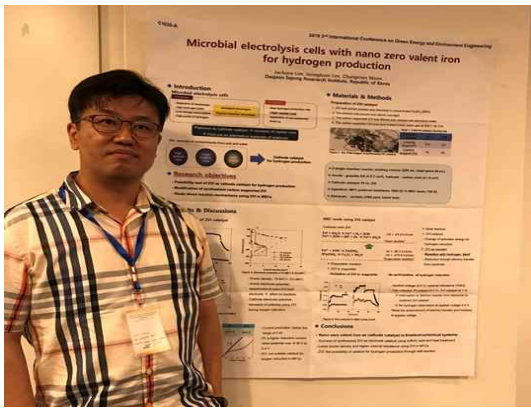
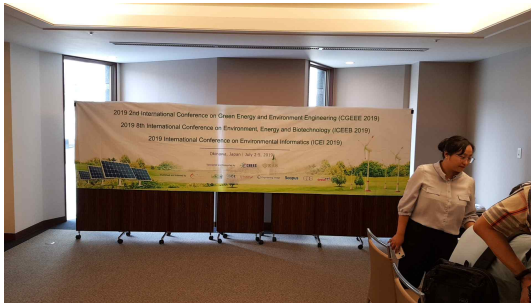
*Please arrive at the conference to upload or copy PPT into the laptop room 10 minutes before the session begins.
 *Note: (1) The registration can also be done at any time during the conference.
 (2) The organizer doesn't provide accommodation, and we suggest you make an early reservation.
 (3) One Best Presentation will be selected from each presentation session, and the Certificate for Best Presentation will be awarded at the end of each session on July 3 and July 4.

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3. 학회 참석 및 발표

- 발표주제: Microbial electrolysis cell with nZVI for hydrogen production
- 학회내용: 발표는 “Wastewater treatment and Bioremediation”, “Waste Recycling and Renewable Energy”, “Nanomaterials and Battery Technology”, “Pollution Control and Emission Reduction”, “Energy Technology and Bioengineering”, “Environmental pollution and prevention”의 6개부문으로 나누어 진행되었으며 Energy Technology and Bioengineering”에 속해 발표하였음
- 수행과제와 연관성: 나노금속을 이용하여 수소 생산을 높이는 방법과 가축분뇨를

0.5톤 규모의 반응조를 통하여 메탄을 생산하는 방법 등이 발표



IV

출장성과(또는 기대효과)

- 신재생에너지에 대한 최신 연구 동향 확보와 정보교환
- 연구결과 발표를 통한 정보공유 및 발전방향 모색

V

참고 자료

- Anongnart Wannapokim, Cheng Yu-Tzu, Wu Sheng-Zhe, Hsieh Ping-Heng and Hung Chun-Hsiung, “Co-immobilization of nano-metal and *C. pasteurianum* for dark fermentation anaerobic hydrogen production”, CGEEE 2019.
- I Ketut Asi Atmika, Kadek Sebayuana, Tjokorda Gde Tirta Nindhia, I Wayan Surata, I Pitu Ari Astawa, Anak Agung Istri Agung Sri Komaladewi, “The effect of loading rate to biogas production rate of the 500 liter anaerobic digester operated with continuous system”, CGEEE 2019.