



— ON/OFFLINE **HYBRID** EVENT —

IWUMD 2022

The 5th International Workshop on Ultraviolet Materials and Devices

May 23(Mon.) – 26(Thu.), 2022 | Maison Glad Jeju, Jeju, Korea

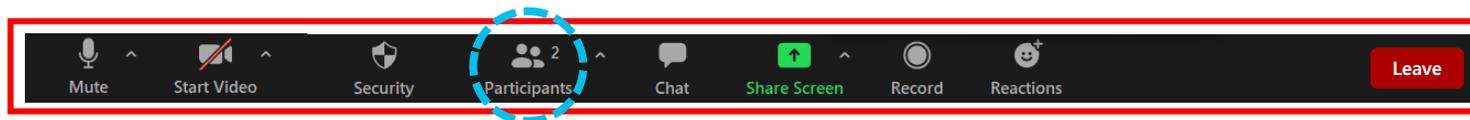
Guidelines for
Presenters

- **Offline ORAL presenters** will make presentations in real-time on-site and it will be sent in real time by Zoom.
- Length of presentation should be in accordance with your time assigned as follows:

Presentation Type	Presentation time (Exclude Q&A time)	Q&A	
Invited Presentation	25 min.	5 min.	Q&A will be proceed in real time at Zoom
Oral Presentation	15 min.	5 min.	

- Oral presenters are asked to bring Power Point (or PDF) slides and present their research in a podium presentation.
 - Presentation File Ratio: 16:9 size
 - File Format: PPT of PDF
- Speakers should arrive in the session room **15 minutes BEFORE the start of their sessions** to report to the session chair.
 - Offline presenters should bring their presentation file on a USB memory stick and submit it to the staff of each presentation room.
 - Files should be uploaded to the local PCs in the session room during the breaks between the sessions.

- **Online Oral Presenters** should enter their **Zoom** session **15 minutes BEFORE the session begins**.
 - Please check your microphone and video in advance (site: <https://zoom.us/test>)
 - Please try to find a quiet environment and maintain the environment during a session.
 - In case of No-show, the Q&A will not proceed or participant will be guided to use the Q&A board depending on the situation.
- Online ORAL presenters' pre-submitted presentation video will be played on Zoom on time by the secretariat staff.
- **All presenters must participate in Q&A in real time.**
- Once you have joined the session, please identify yourself to our staff that you are a presenter of the session.
- Please modify your name according to the procedure below:
 - ① Click “Participants” on Zoom Menu
 - ② Fine “More” in your name filed and click “Rename”
 - ③ Re-type your name: *Presentation code, Name (Affiliation) **Example** *TuB1-2, Julie Son (Korea Univ.)
 - An asterisk(*) in front makes your name move to the top of the participant list



The image shows a Zoom meeting interface with several callouts and annotations:

- Lower Hand:** A yellow callout pointing to the 'Lower Hand' option in the host menu.
- Participants List:** A red dashed box highlights the 'Participants (2)' panel on the right side of the screen.
- Chat Box:** A red dashed box highlights the 'Chat' panel on the right side of the screen.
- Audio / Video Setting:** A yellow callout pointing to the 'Mute' and 'Start Video' buttons in the bottom toolbar.
- To Open Participants List:** A yellow callout pointing to the 'Participants' icon in the bottom toolbar.
- To Open Chat Box:** A yellow callout pointing to the 'Chat' icon in the bottom toolbar.
- Raise Hand for Q&A:** A yellow callout pointing to the 'Raise Hand' button in the bottom toolbar.
- Exit ZOOM:** A yellow callout pointing to the 'Leave' button in the bottom toolbar, with the text: "*Do not click the 'Leave' button unless you intend to leave the session."
- Recording is strictly prohibited:** A red arrow points to the 'Record' button in the bottom toolbar.

- **Poster session** is based on presenting A0 size poster presentation materials on the online platform.
- Poster sessions and Q&A are always available **on-demand** on the online platform.

Offline Presenters

- **Offline POSTER presenters must prepare their posters in advance, display them** on the designated panels during the put-up time, and be available for discussions through the entire duration of the session.
(If presenters would like to make an Offline presentation, they have to register as an offline category when register.)
**** Please be noted that the venue does not provide printing facility for posters.**
- The Poster file should be used IWUMD 2022 Template.
 - ❖ Presentation File Ratio: A0 size
 - ❖ Each Poster should include the abstract title, authors, and affiliation.
- Q&A of posters is basically conducted through the **Q&A board on the online platform**, and Offline poster presenters can conduct it on-site through the entire duration of the session.
- Additional Information for the **offline poster session only**

Date	Put-up Time	Presentation Time	Take-down Time
May 24 (Tue.)	14:00-18:00	18:30-19:30	19:30-20:00

- ❖ Location: Convention Hall B
- ❖ Poster Panel Size: 1m in width and 2.5m in height.
- ❖ Please set-up your poster on a panel matched to your paper number.
- ❖ Please remove your poster according to the take-down time. All remaining posters will be discarded.
- ❖ The materials such as scissors, scotch tapes, and thumb tacks will be provided in the hall.

- You may find out papers by topics.
- You can see the abstract file by clicking **View** button, and the Poster file by clicking **View** button.

e-Poster Session

- AIN Bulk Crystals and Templates +
- Growth and Properties of AlGaN Heterostructures +
- BN Growth and Fundamental Properties +
- Growth and Properties of Oxides (Ga₂O₃ etc.) and Diamond +
- UV-emitters (Lasers and LEDs) and Detectors +
- Nanostructures and Nanodevices -

Presentation No	Title	Abstract File	Poster File
P-49	Highly Efficient White Organic Light Emitting Devices Fabricated Utilizing a Perovskite Quantum Dot-Based Color Conversion Fiber Seong Su Choi, Dae Hun Kim, Tae Whan Kim Hanyang University, Korea	View	View
P-50	Self-Healable Memristive Devices Based on a Zein Active Layer Inserted with Graphene Quantum Dots Yoon Chul Hwang, Jun Seop An, Youngjin Kim, Tae Whan Kim Hanyang University, Korea	View	View
P-51	Ultra-Long n-GaN Microwire Structures for UV Photodetector Jeong-Kyun Oh, Yong-Ho Ra, Dae-Young Um, Bagavath Chandran, Sung-Un Kim, Ji-Yeon Kim, Cheul-Ro Lee Jeonbuk National University, Korea	View	View

Ultra-long n-GaN Microwire Structures For UV Photodetector

Jeong-Kyun Oh, Yong-Ho Ra, Dae-Young Um, Bagavath Chandran, Sung-Un Kim, Ji-Yeon Kim, Cheul-Ro Lee.*

School of Advanced Materials Engineering, Jeonbuk National University, Jeonju 54896, Korea

*E-mail : crlee7@jbnu.ac.kr

With the rapid development of low dimensional semiconductor materials in recent years, nano/micro photodetectors (PDs) have attracted a great deal of attention due to their widespread use in image sensing, convert communication, environmental, ozone tracking, and ultraviolet (UV) astronomy. The n-GaN microwire (MW) can be an excellent candidate for making PDs

Abstract

With the rapid development of low dimensional semiconductor materials in recent years, nano/micro photodetectors (PDs) have attracted a great deal of attention due to their widespread use in image sensing, communication, environmental, ozone tracking, and ultraviolet (UV) astronomy. The n-GaN microwire is an excellent candidate for making PDs capability to long lifetime, high stability against radiation (radiation (EC) etching. Gallium nitride (GaN) are direct bandgap materials of optical bandgap 3.4 eV. We have grown the ultra-long n-GaN MW for UV PDs. The ultra-long n-GaN MW was fully grown on Si(111) substrate using the MOCVD system. The surface morphology, crystal quality, and electronic properties of ultra-long n-GaN MW structures were studied by field-emission scanning microscopy (FE-SEM), X-ray diffraction (XRD), Transmission electron microscopy (TEM), photoluminescence (PL), and photocurrent (PC) measurements and photocurrent was demonstrated. FE-SEM shows the MW structures with the ultra-long length (~13 μm) and XRD analysis means the high crystal quality with strain relaxation and termination from long-structure. The optical properties of n-GaN MW have been investigated using room temperature of PL and CL studies. These results also mean the large diameter, the high aspect ratio of the MW structures can increase the active area. Therefore, it is expected that high-performance UV PDs can be fabricated using the ultra-long n-GaN MW.

Process conditions

Figure 1. Experimental process of ultra-long n-GaN microwires

Click

- You may find out papers by topics.
- For Poster Session, Q&A can be conducted using the Q&A board. If someone leave the question by clicking **‘Question’** button, an email will be sent automatically to the presenter of the abstract.
- The presenter can answer the question by clicking the **‘Answer’** button, and a notification email will be sent to the questioner.

Q&A

You can search for a presentation title to ask a question using either the presentation number or the title keyword.

1. AIN Bulk Crystals and Templates +
2. Growth and Properties of AlGa_N Heterostructures -

All Invited Talk Oral Poster

Invited [ThA3-1] Strategies of AlGa_N Heterostructure Design and Growth for UVC Optoelectronic and Electronic Device Applications
Uiho Choi¹, Minho Kim¹, Byeongchan So², Okhyun Nam¹

Abstract Q&A

Question

Click



Invited [ThA3-1] Strategies of AlGa_N Heterostructure Design and Growth for UVC Optoelectronic and Electronic Device Applications
Uiho Choi¹, Minho Kim¹, Byeongchan So², Okhyun Nam¹

Abstract Q&A

Question

Cancel Submit

Invited [ThA3-1] Strategies of AlGa_N Heterostructure Design and Growth for UVC Optoelectronic and Electronic Device Applications
Uiho Choi¹, Minho Kim¹, Byeongchan So², Okhyun Nam¹

Abstract Q&A

Question

Test Account, test1 | 2022-05-10 17:39:14.0
[TEST] leave the question

Answer Edit Delete

Click



Click

