Company Name	Solid-State Lighting Lab in GIST	Company Logo
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Exhibitor Introduction	Solid-State lighting Lab in GIST is doing researches on compound-semiconductor-based micro-LEDs and solar cells. Researches about micro-LEDs in our lab include growth of nitride LED structures with MOCVD and the whole process for LED chip fabrication and full-color integration of LEDs. Research of CZTSSe thin-film solar cells is also one of our research field. We have been working on flexible solar cell applications combining with LEDs array.	
Exhibit Description	Our exhibition is about what we've done so far and will do in our research fields. We have been doing the growth of GaN for various practical applications. To expand the application with high-quality epitaxy, **Remote**	

	Epitaxy of GaN using the two-dimensional (2D) graphene has been studied by metal-organic chemical vapor deposition (MOCVD). Remote Epitaxy is carried out with the help of 2D material penetrating the stronger potential field of the substrate, which enables quasi-homoepitaxy as the meaning of 'remote' despite its presence. The grown single-crystalline films can be released from the substrate covered with 2D graphene due to its weak van der Waals force and open up a new opportunity for the application of GaN-based devices with flexibility and transferability, especially as high-integrated flexible LED displays. LED chip fabrication and full-color integration of LEDs are also our main research fields. We have fabricated a full-color inorganic LEDs array by using a re-growth and transfer technique. This inorganic LED array can describe various colors without a color filter and we don't need any additional equipment for full-color realization such as align bonder. In the field of CZTSSe thin-film solar cells, we have developed stable and efficient absorber layers and also done a research to elucidate the basic mechanism for enhanced performance. Now, we are trying to make flexible solar cells and transparent solar cells combining with LED arrays.
Exhibit Product	Posters showing our research fields and related samples.