
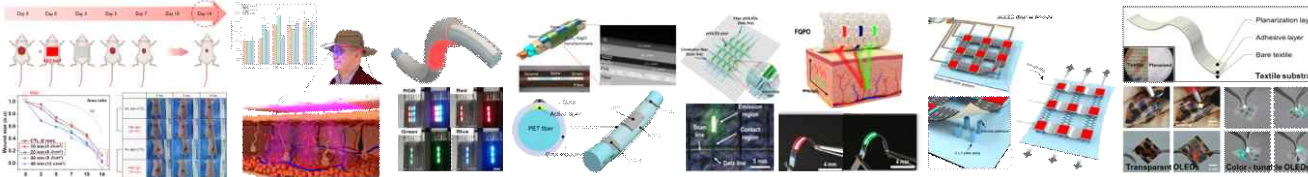


## <Professor Kyung Cheol Choi>

 <div>Advanced Display and Nano Convergence Laboratory</div>	<b>■ Contact information</b>		
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<b>■ Current state of the Lab. (in 2025 Spring Semester)</b>			
Postdoctoral Fellows : 1      PhD Students: 13      Master's Student: 7			
<b>■ Research Areas</b>			
<p>▶ <b>Transparent and Flexible display</b> – Fundamental researches on encapsulation, electrodes, and out-coupling enhancement methods applicable to transparent and flexible OLED displays.</p> <p>▶ <b>Wearable and Stretchable display</b> – Various researches on display devices fabricated on textiles, such as fabric and fiber, used for truly wearable (wearing) and stretchable OLEDs are going on in the ADNC lab. Wearing textile displays are clothing-like wearable devices that can be used for fashion displays, IoT devices, and photo-therapeutic patches. Stretchable displays are beyond the curved and foldable displays and a strong candidate for future displays.</p> <p>▶ <b>Bio and Medical applications (Photo-therapeutic by using display devices)</b> - Research on photo-therapeutic and cell &amp; animal experiments (in-vitro &amp; in-vivo) by using display devices used for medical tools, health-care is going on</p> <p>▶ <b>Nanotechnology and nano-convergence</b> – New innovative technologies such as active metaphotonic color-imaging devices, oxide TFTs are also going on in ADNC Lab.</p>			
			
<b>■ Recommended courses &amp; Career after graduation</b>			
The lecture titled 'Display engineering' is recommended. A total of 62 people (as Ph.D. 43, M.S. 19) graduated from ADNC Lab. are working in university, corporations, and national institutes as professors and research engineers.			
<b>■ Introduction to other activities besides research</b>			
ADNC lab emphasizes team-work through various sports activities such as footsal, basketball, hiking and etc.			
<b>■ Introduction to the Lab.</b>			
The ADNC lab conducts research on future technology of display devices. Until now, we have published 204 SCI papers, delivered 236 presentations in conferences, and filed 119 patents. ADNC lab had led the Center for Advanced Flexible Display Convergence (CAFDC), an 'Advanced Research Center Program' of the National Research Foundation of Korea (NRF) from 2007 to 2016. Since 2017, Our lab has been in charge of the important part in "Attachable Photo Therapeutics Center for e-Healthcare", a new Engineering Research Center (ERC) of NRF, which is funded until 2024. Professor Kyung Cheol Choi has been in charge of the LG Display-KAIST cooperation center from 2010 until now, and our laboratory hence has many opportunities for industry-academia cooperation with LG Display. From previous research on the world's most efficient PDP to current research on textile-based washable optoelectronic modules, we have reported numerous excellent results and have attracted attention from worldwide industries and various media. Students interested in future technologies should take note of our lab.			
<b>■ Recent research achievements (2022-2025)</b>			
30 SCI papers, 38 presentations in conference, 27 patents applied for or registered.			
[Representative Journal papers]			
<ul style="list-style-type: none"><li>- <b>[Front Cover]</b> Advanced Micro-OLED Integration on Thin and Flexible Polymer Neural Probes for Targeted Optogenetic Stimulation (<i>Advanced Functional Materials</i> IF: 18.5, 2025)</li><li>- Quantum-Dot Light-Emitting Fiber Toward All-In-One Clothing-Type Health Monitoring (<i>ACS Nano</i> IF: 15.8, 2024)</li><li>- <b>[Front Cover]</b> Highly Air-stable, Flexible, and Water-resistive 2D Titanium Carbide MXene-based RGB Organic Light Emitting Diode Displays for Transparent Free-form Electronics (<i>ACS nano</i> IF: 15.8, 2023)</li></ul>			
