

보도 자료

문의

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솔잎기술, 머크와 손잡고 폴더블 소재 시장 진출

KAIST 창업기업 솔잎기술, 세계적 선도 과학기술 기업 머크와 사업 파트너십 계약 체결

KAIST(총장 신성철) 교원 창업기업인 솔잎기술(대표 배병수)은 세계적 선도 과학기술 독일 기업 Merck(이하 머크)와 사업 파트너십 계약을 체결했다. 두 기업은 솔잎기술이 보유하고 있는 디스플레이 소재 기술을 함께 사업화한다.

머크는 솔잎기술이 개발한 폴더블/롤러블 디스플레이 하드코팅 소재를 독점적으로 공급하게 된다. 반도체 및 디스플레이 소재 세계시장을 선도하는 머크는 미래 성장을 위한 집중 투자 분야 중 하나인 플렉시블, 폴더블, 롤러블 OLED 디스플레이 신소재 사업을 개시하면서 솔잎기술의 하드코팅 소재를 첫 번째 제품으로 사업화한다. 고경도, 내스크래치성, 유연성, 투명성을 동시에 보유하는 솔잎기술의 하드코팅 소재는 플렉시블 디스플레이 제품의 핵심 기술 요구들을 만족시킬 수 있는 원천소재이다. 이번 파트너십 계약으로 솔잎기술의 원천소재 기술이 머크가 오랫동안 디스플레이 시장에서 핵심소재 공급업체로 쌓아온 명성이 결합되어 신뢰성 높은 고품질 제품을 공급하게 된다.

대학 창업기업과 글로벌 과학기술 선도 업체와의 파트너십은 국내 대학에서 개발된 원천 소재기술이 폴더블/롤러블 OLED 디스플레이와 같은 첨단 제품에 적용될 수 있는 좋은 사례이다.

(주)솔잎기술 : KAIST 신소재공학과 배병수교수가 창업한 실록산 하이브리드 소재를 사업화하는 회사이다. 현재 플렉시블 하드코팅 소재, 투명 강화 플라스틱 필름, LED 봉지재 및 퀀텀닷 실록산 수지 등을 디스플레이 및 광전자 소자 응용 제품들을 사업화하고 있다.

Merck : 1668년 독일에서 설립되어 헬스케어, 생명과학 및 전자재료 분야에서 세계적으로 선도하고 있는 과학기술 회사이다. 현재 한국을 포함하여 전세계 66개국에서 57,000명의 임직원을 고용하고 있으며, 2019년 매출은 162억 유로이다.

Merck, a leading science and technology company, operates across healthcare, life science and performance materials. Around 57,000 employees work to make a positive difference to millions of people's lives day by day by creating more joyful and sustainable ways to live. From advancing gene editing technologies and discovering unique ways to treat the most challenging disease to enabling the intelligence of devices – the company is everywhere. Merck generated sales of €16.2 billion in 66 countries.

Scientific exploration and responsible entrepreneurship have been key to Merck's technological and scientific advances. This is how Merck has thrived since its founding in 1668. The founding family remains the majority owner of the publicly listed company. Merck holds the global rights to the Merck name and brand. The only exceptions are the United States and Canada, where the business sectors of Merck operate as EMD Serono in healthcare, MillipreSigma in life science, and EMD Performance Materials.

첨부 : Merck 보도자료 (2020년 12월 1일)

December 1, 2020

Merck Announces Partnerships to Advance Materials for Flexible, Foldable and Rollable OLED Displays

- **Partnerships with Optitune and Solip Tech will allow Merck to accelerate the commercialization of liviFlex™, a new range of display materials that addresses challenges in the manufacture of flexible, foldable and rollable OLED displays.**

Darmstadt, Germany, December 1, 2020 – Merck, a leading science and technology company, today announced partnership agreements with Optitune Oy, Oulu, Finland and Solip Tech Co., Ltd., Daejeon, Korea, to bring the first products under the new umbrella brand liviFlex™ to the display market. liviFlex™ offers a novel range of display materials that addresses challenges in the manufacture of flexible, foldable and rollable OLED displays, which are known as free-form displays. With its Performance Materials business sector, Merck is a leading player in the electronic materials market and materials for OLED displays are one of the defined investment focus areas for future growth.

“Free-form devices are one of the fastest-growing trends in data-driven electronics,” says Michael Heckmeier, Head of the Display Solutions business unit within the Performance Materials business sector of Merck. “Our partnerships with Optitune and Solip Tech allowed us to quickly respond to the market requirement to develop robust and reliable solutions for our display customers. We are excited to bring our first liviFlex products to the market and look forward to further tapping into this exciting field of free-form displays.”

The first liviFlex™ series is called liviFlex™-H, which offers versatile and customizable hard coat solutions. These polymerizable solutions cover all key



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technology parameters for free-form devices: hardness, scratch resistance, flexibility, and optical characteristics, such as transparency and color. With these partnerships, Merck is combining new R&D capabilities and material systems with decades of experience in delivering highly reliable and superior quality solutions to the display industry. Financial terms were not disclosed.

Free-form displays bring new challenges to the display industry

Contrary to the flat, rectangular shape of standard displays, free-form OLED displays offer bespoke shapes and novel design features with surfaces that can be bent, folded, stretched, or rolled. In order to enable these properties, the display materials in these devices must be thin yet robust to prevent display stress caused by continuous folding and rolling. Compared with standard displays, free-form OLED displays require about a 60% thickness reduction of the display module.

Revenues of free-form displays are expected to reach US\$ 8.9 billion by 2025, which is 13 times the revenue generated by this segment today.¹

References

1. OMDIA Amoled & Flexible Display Technology Tracker Q1 2020

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About Merck

Merck, a leading science and technology company, operates across healthcare, life science and performance materials. Around 57,000 employees work to make a positive difference to millions of people's lives every day by creating more joyful and sustainable ways to live. From advancing gene editing technologies and discovering unique ways to treat the most challenging diseases to enabling the intelligence of devices – the company is everywhere. In 2019, Merck generated sales of € 16.2 billion in 66 countries.

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