Flexible high-resolution home theatre displays come closer to reality

From ANI

Washington, August 21: You may soon get to enjoy facilities like flexible high-resolution home theatre displays, wearable health monitors, and biomedical imaging devices because scientists are working on a novel process for creating new classes of lighting and display systems.

John Rogers, the Flory-Founder Chair Professor of Materials Science and Engineering at the University of Illinois, has revealed that the new process is all about creating and assembling ultrathin, ultrasmall inorganic light-emitting diodes (LEDs) into large arrays offers new classes of lighting and display systems with interesting properties, such as see-through construction and mechanical flexibility.

He said that such properties would be impossible to achieve with existing technologies.

"Our goal is to marry some of the advantages of inorganic LED technology with the scalability, ease of processing and resolution of organic LEDs," said Rogers.

Compared to their organic counterparts, inorganic LEDs are brighter, more robust and longer-lived.

Organic LEDs, however, are attractive because they can be formed on flexible substrates, in dense, interconnected arrays.

Rogers and his colleagues-including collaborators from Northwestern University, the Institute of High Performance Computing in Singapore, and Tsinghua University in Beijing-say that the new technology combines features of both.

"By printing large arrays of ultrathin, ultrasmall inorganic LEDs and interconnecting them using thin-film processing, we can create general..."