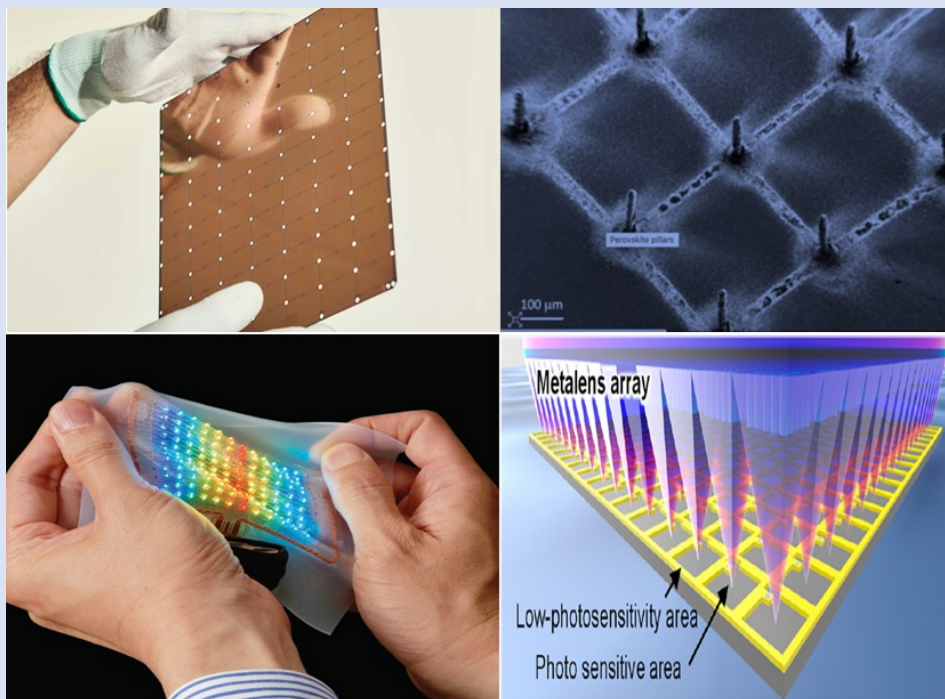


Future Trends on Radiation Detectors

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Precision in space and time, radiation tolerance, easy fabrication, high-rate data transmission and processing are the key requirements for the next generation of radiation detectors to access hidden and potentially breakthrough or lifesaving information in fundamental science research and in real life applications. Novel technologies for radiation imaging take inspiration from materials science and industrial trends. This presentation will review the latest developments of detectors using 2D materials, 3D printing, VLSI electronics fabrication, integration, and microfabrication.



Cinzia DaVià is a Professor of Physics at the University of Manchester UK, and a visiting Research Professor at Stony Brook University USA. She is an expert in innovative radiation detectors for High-Energy Physics and Bio-Medical applications and a member of the ATLAS experiment at the CERN-LHC. For the ATLAS Upgrade she formed and led the ATLAS 3D R&D Collaboration to industrialize microfabricated 3D sensors, which were installed for the first time in the ATLAS-IBL experiment in 2012. She co-authored a book on 3D sensors and proved that their radiation hardness properties are dependent on their geometry. She is also a co-discoverer of the "Lazarus Effect" proving the recovery of silicon detectors' properties after heavy irradiation at cryogenic temperatures. She is the co-chair of the Independent Committee of the EU-ATTRACT Initiative to promote Radiation Imaging Technology Research across different fields of applications in Europe and the Chief Editor of the Frontiers in Physics Radiation Detectors and Imaging Journal. As a member of Institute of Electrical and Electronic Engineering, Nuclear and Plasma Society she was the 2019 Nuclear Science Symposium Chair and currently a member of the IEEE TAB Program on Climate Change. Cinzia is also a proud and active member of IEEE WIE which promotes the education, networking, and career progression of women in STEM fields globally.

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YouTube Live: <https://youtube.com/live/0Uc0fv9qGFo?feature=share>