

**DROP-IT**

*www.drop-it.eu*

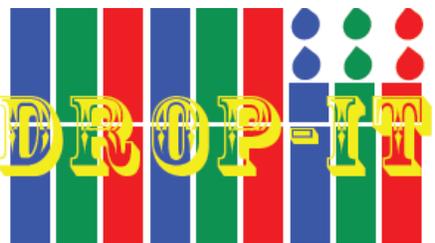
**Contract No. 862656**



EUROPEAN COMMISSION  
RESEARCH EXECUTIVE AGENCY

H2020 Fostering Novel Ideas: FET-Open

Juan P. Martínez-Pastor  
University of Valencia



DRop-on demand flexible Optoelectronics & Photovoltaics by means of Lead-Free halide perovskITes

BEFORE

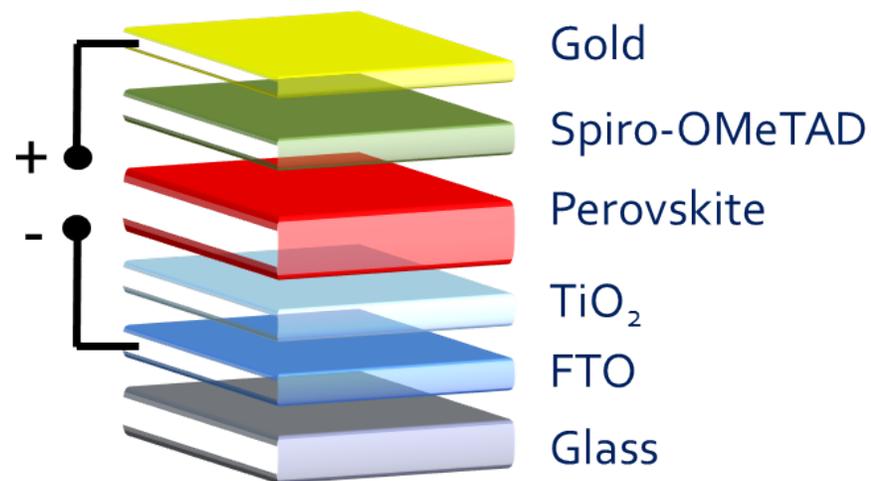
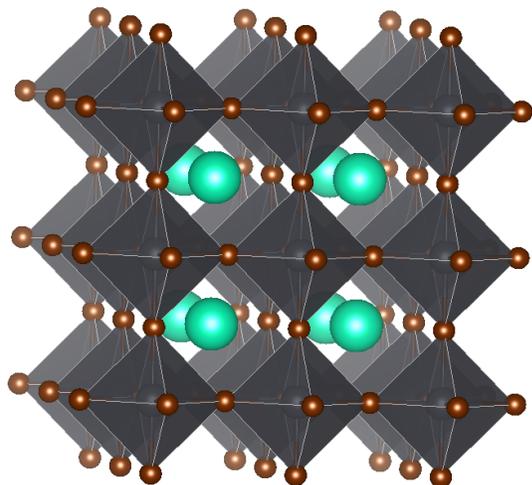
---



**SILICON PV: WELL ESTABLISHED TECHNOLOGY**

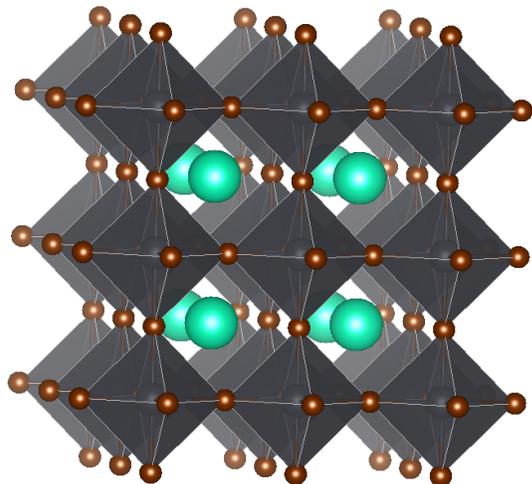
**> 40 YEARS**





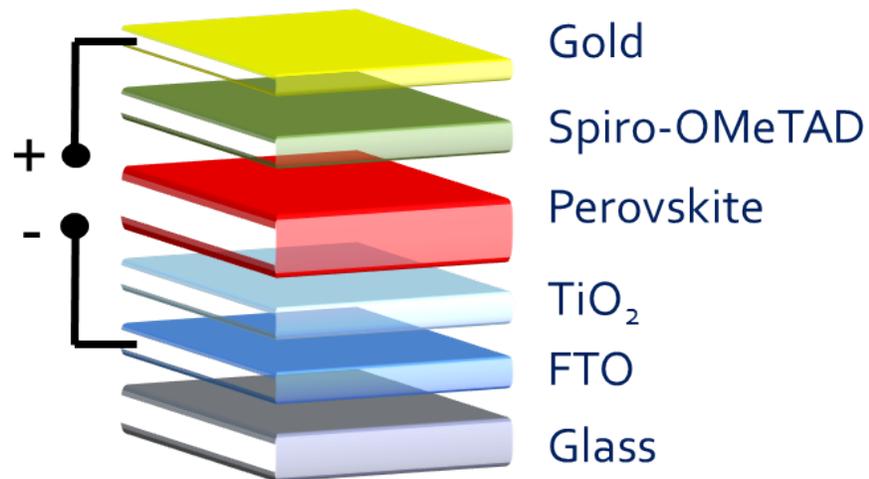
# IN ONLY 7 YEARS

SOLAR CELLS OF **LEAD**  
**HALIDE PEROVSKITES**  
DEMONSTRATED  
EFFICIENCIES (>25%) VERY  
CLOSE TO **SILICON !!!**



**INCONVENIENTS:**

**LEAD + STABILITY**





# DROP-IT

NO LEAD



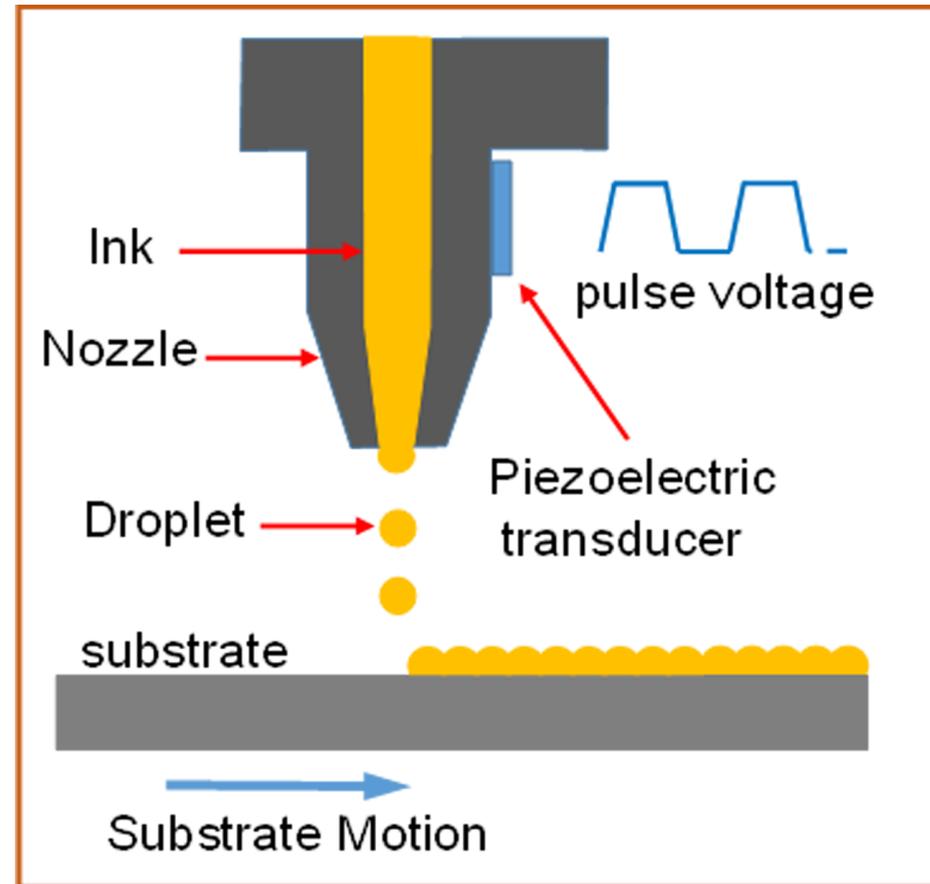
Lead Free  
Perovskites





# DROP-IT

## NO LEAD + INKJET PRINTING





# DROP-IT

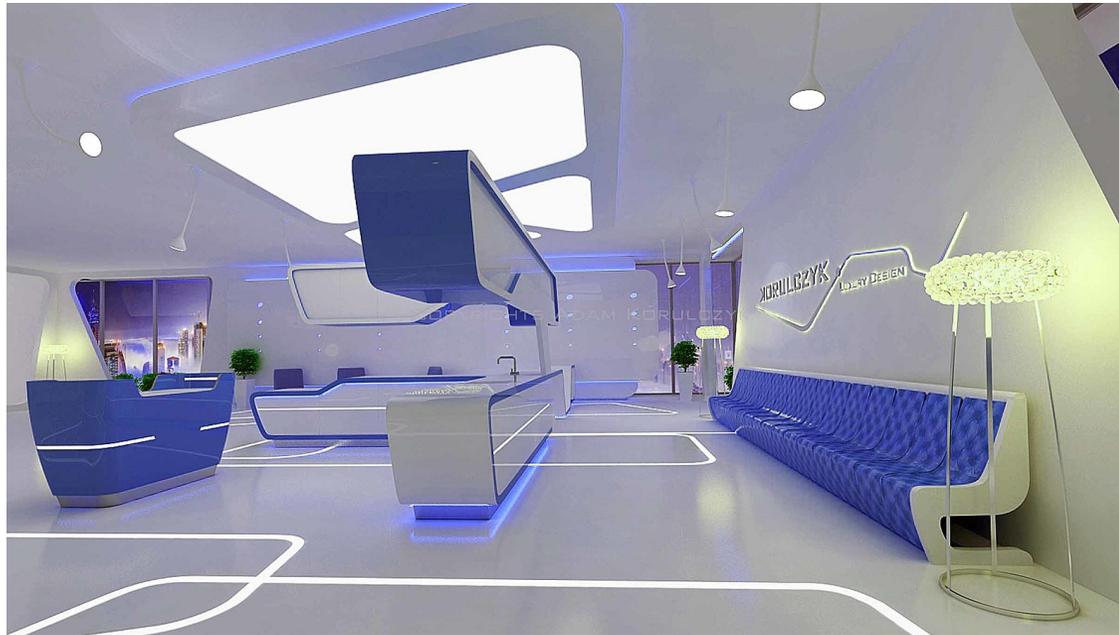
**NO LEAD +  
INKJET PRINTING +  
FLEXIBLE SUBSTRATES**

**= *FUTURE DEVICES***  
***PV, LIGHTING, PHOTONICS***



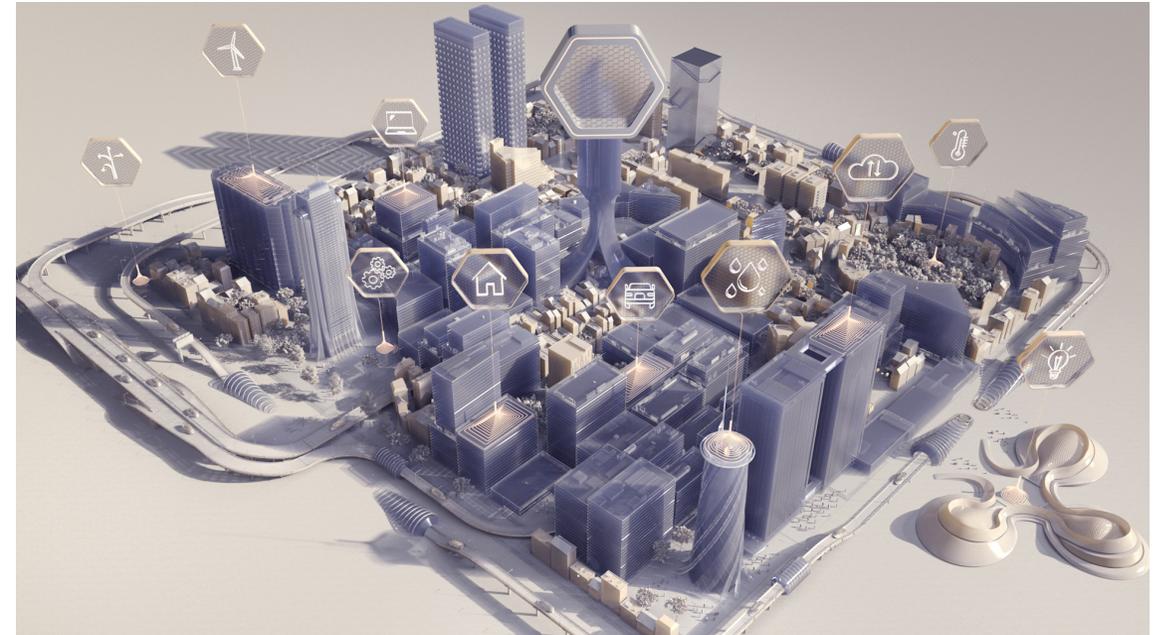


Free – wikimedia commons



## SMART FURNITURES INDOOR PV

© SAULE TECHNOLOGIES



## THE INTERNET OF THINGS





## INTERDISCIPLINAR TEAM:

- 1) **Coordinator:** [University of Valencia](#)
- 2) University of Barcelona ([UB](#))
- 3) University Jaume I ([UJI-INAM](#))
- 4) ETH Zurich ([ETHZ](#))
- 5) [INSA Rennes](#)
- 6) Saule Research Institute ([SRI](#))
- 7) [Saule Technologies](#)
- 8) [Avantama](#)



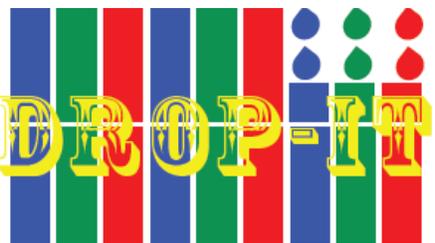


**THANKS FOR YOUR ATTENTION!!**

PLEASE, VISIT OUR WEB FOR MORE DETAILS  
AND CURRENT WORK: **[www.drop-it.eu](http://www.drop-it.eu)**

Twitter: @DropitProject

or write to me: [Juan.Mtnez.Pastor@uv.es](mailto:Juan.Mtnez.Pastor@uv.es)



DRop-on demand flexible Optoelectronics & Photovoltaics by means of Lead-Free halide perovskites