



ARKEMA

PIEZOTECH

Polymères Fluorés Electro-actifs
pour l'électronique Organique

UNAFIC 2021-11-23

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PIEZOTECH

ARKEMA

ARKEMA INNOVATIVE
MATERIALS FOR
A SUSTAINABLE WORLD



CA 2020 : 7,9 b€

20600 Talents

Présent dans 55 pays

147 Sites industriels

15 Centres de recherche

1600 Chercheurs

PIEZOTECH

5 PLATEFORMES D'INNOVATION ET DE RECHERCHE POUR RÉPONDRE AUX ÉVOLUTIONS DU MARCHÉ ET AUX ENJEUX ENVIRONNEMENTAUX



Nouvelles énergies

Développer des matériaux pour le solaire, l'éolien et les batteries électriques



Gestion des ressources naturelles

Agir pour préserver les ressources naturelles (solutions biosourcées ou recyclables et gestion de l'eau)



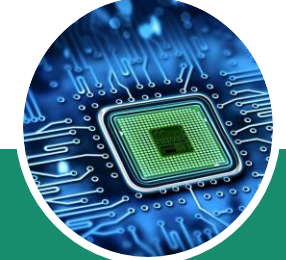
Performance et isolation de l'habitat

Contribuer à diminuer la dépense énergétique des habitats



Allègement des matériaux

Matériaux avancés pour les composites et l'impression 3D



Électronique

Fournir des solutions pour mettre l'électronique à la portée de tous

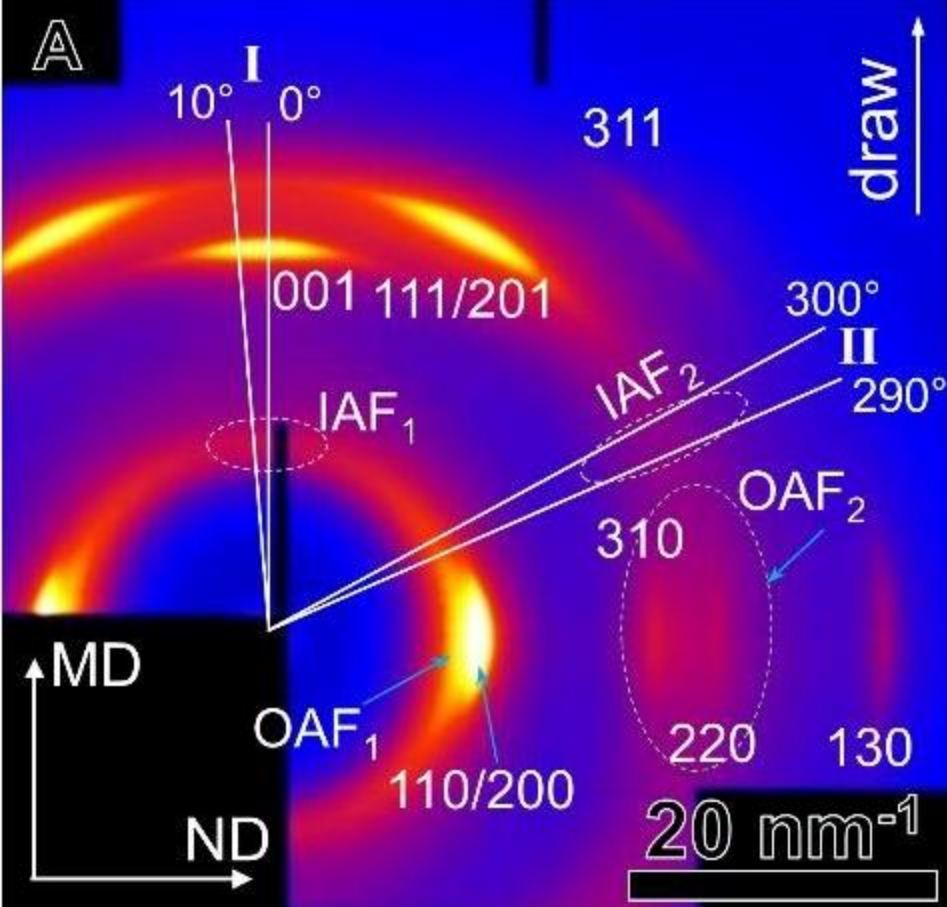




ARKEMA

Piezotech® :
Polymères Fluorés
Electroactifs

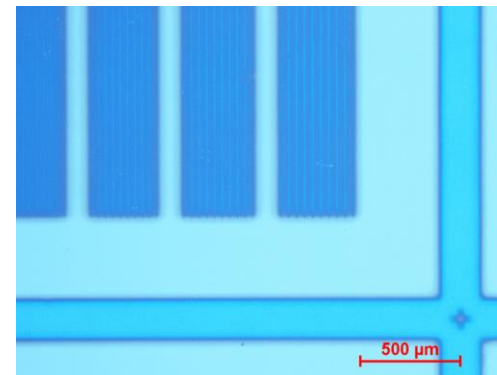
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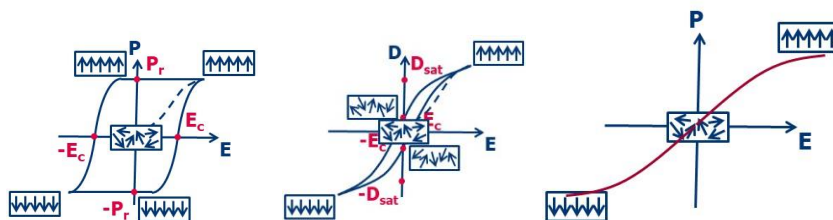
es polymères fluorés électroactifs

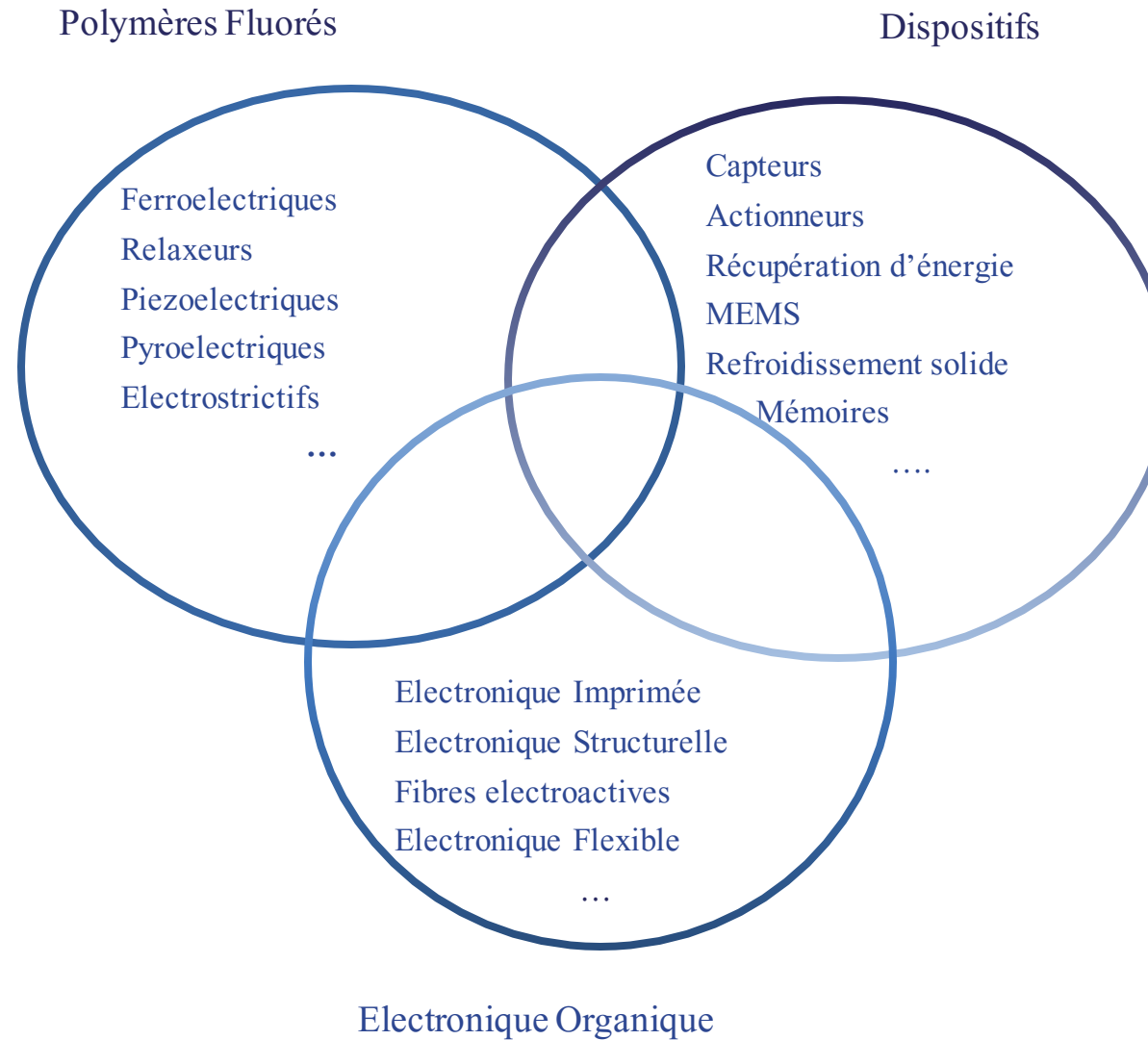
de la solubilité,
on et forme cristalline

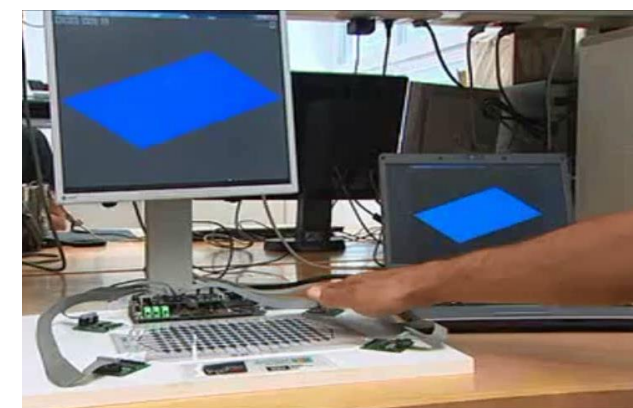
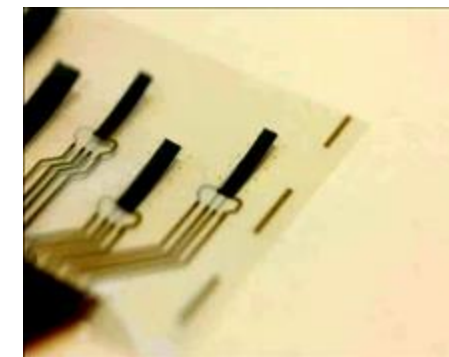
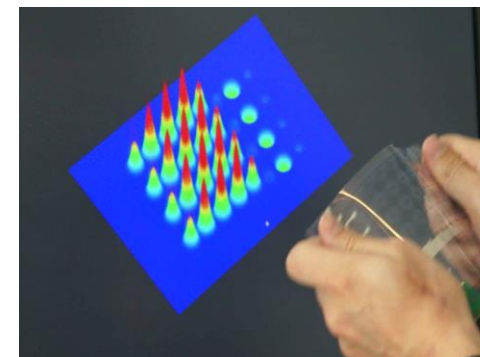
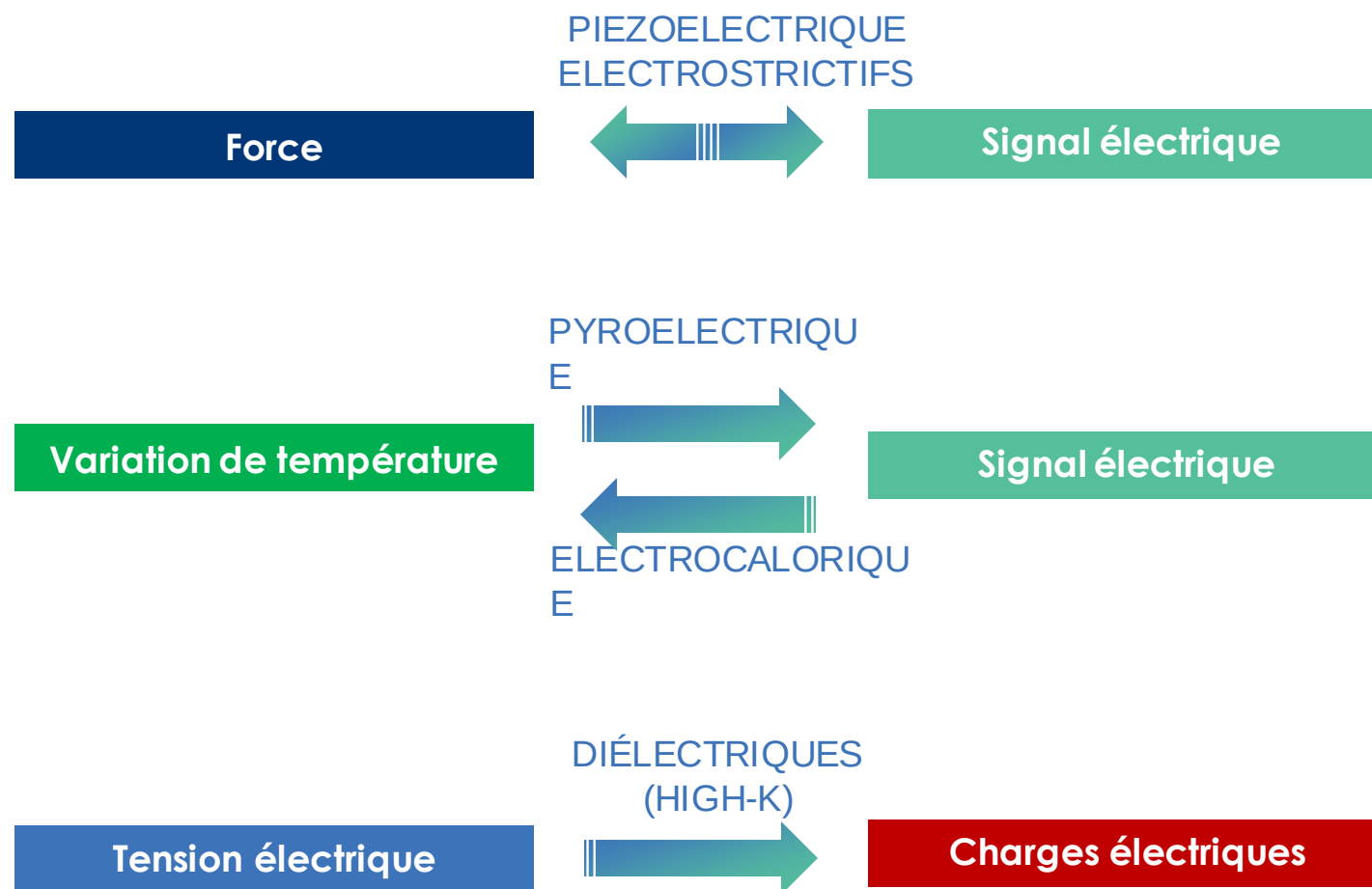
Fonctionnalisation



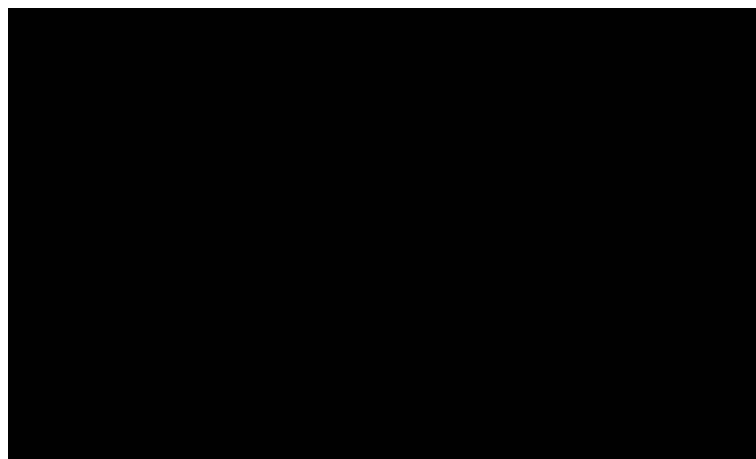
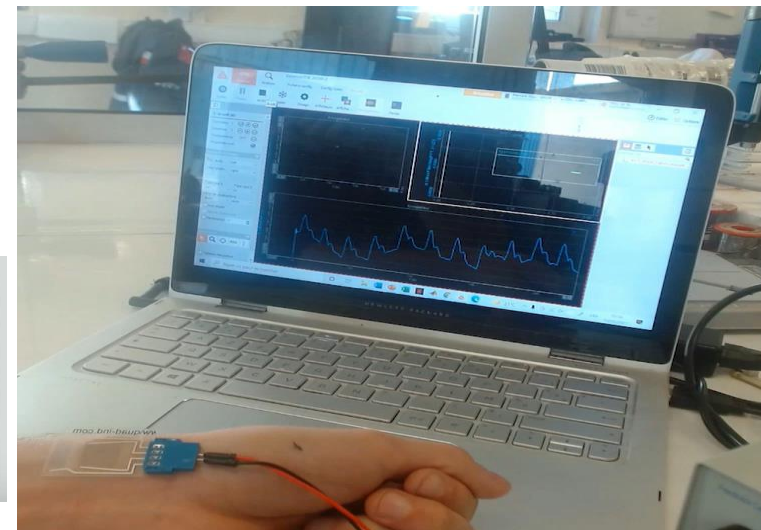
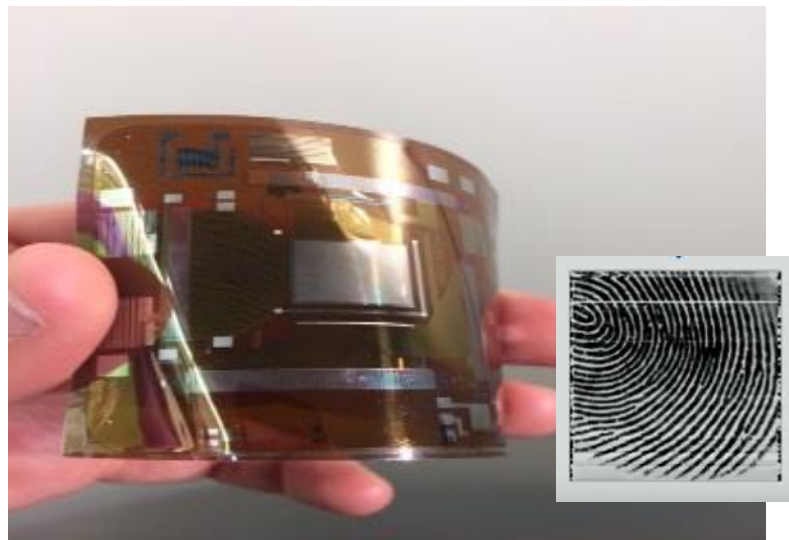
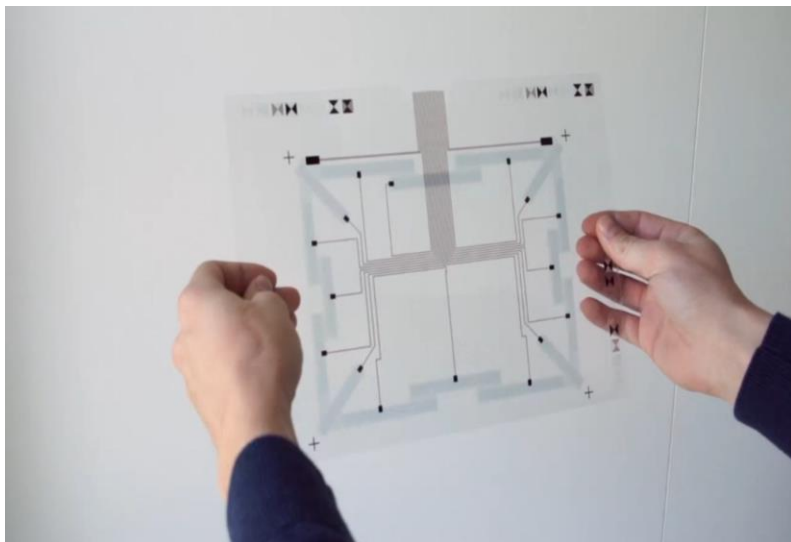
Formulation





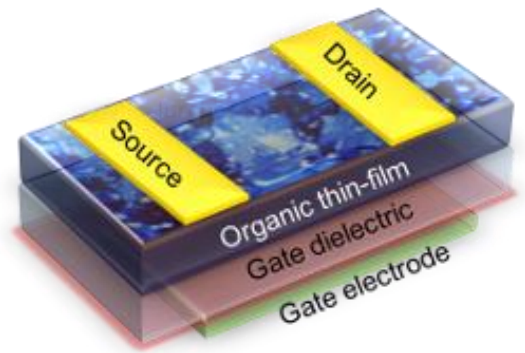


Capteurs

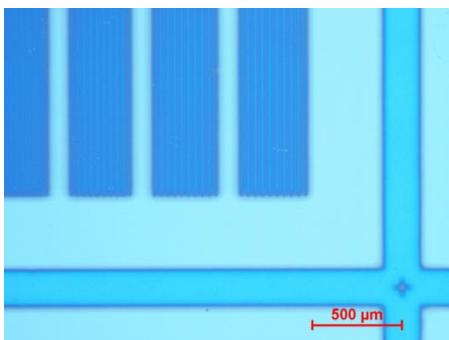


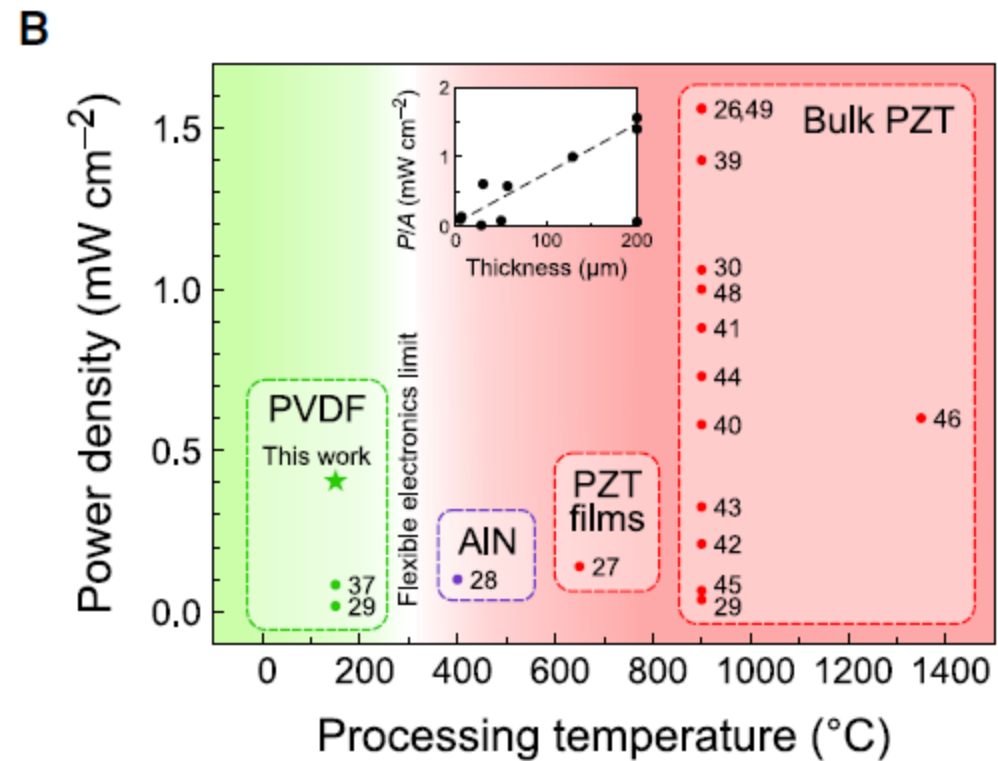
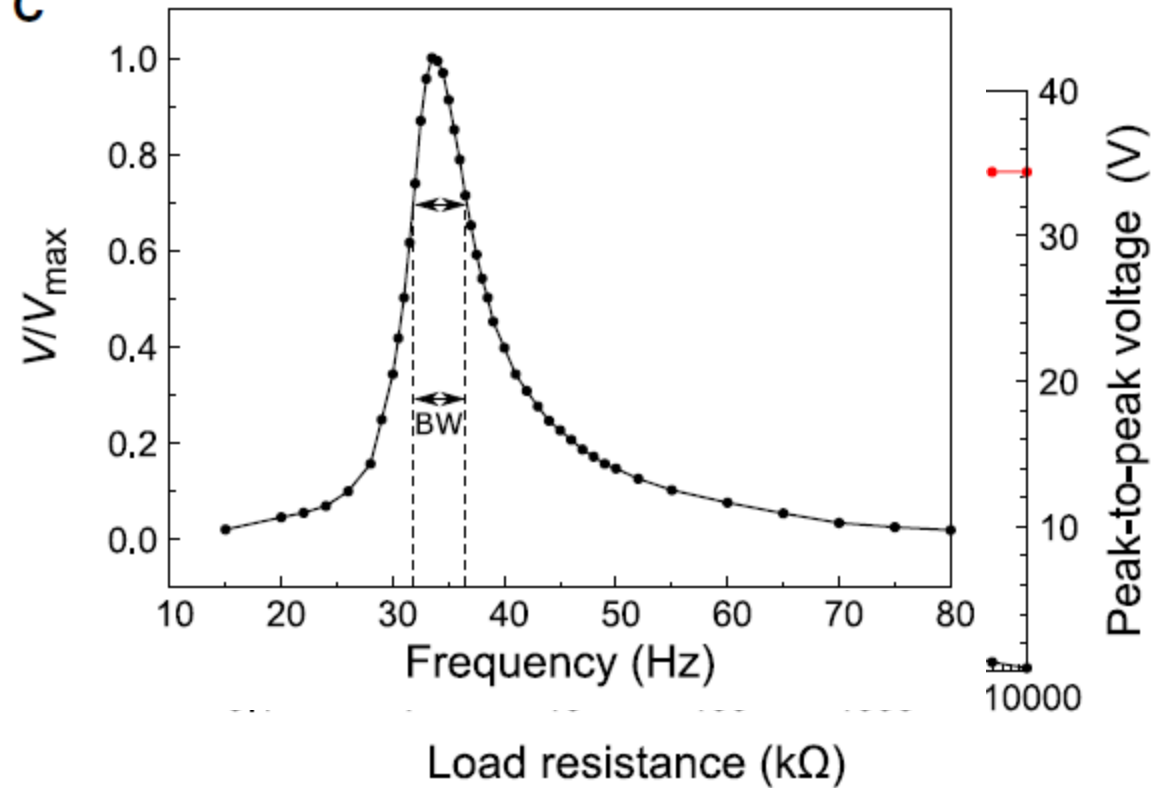
	P(VDF-TrFE-CFE), $ V_G = 3 \text{ V}$	PMMA, $ V_G = 100 \text{ V}$	PS, $ V_G = 80 \text{ V}$
Semiconductor	Saturation carrier mobility $\mu \text{ (cm}^2 \text{ V}^{-1} \text{ s}^{-1}\text{)}$		
pBTTT-C16	0.4 ± 0.2	0.15 ± 0.05	0.09 ± 0.03
P3HT	0.3 ± 0.2	0.12 ± 0.02	0.09 ± 0.01
P(NDI2OD-T2)	0.1 ± 0.04	0.45 ± 0.15	0.7 ± 0.2

es pour transistors organiques



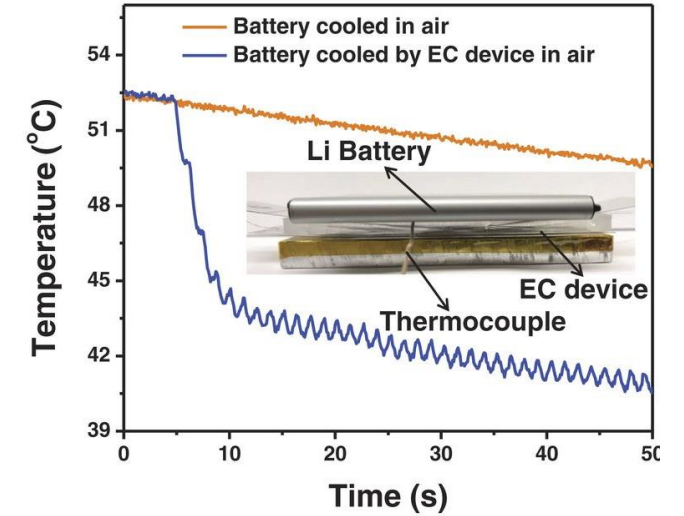
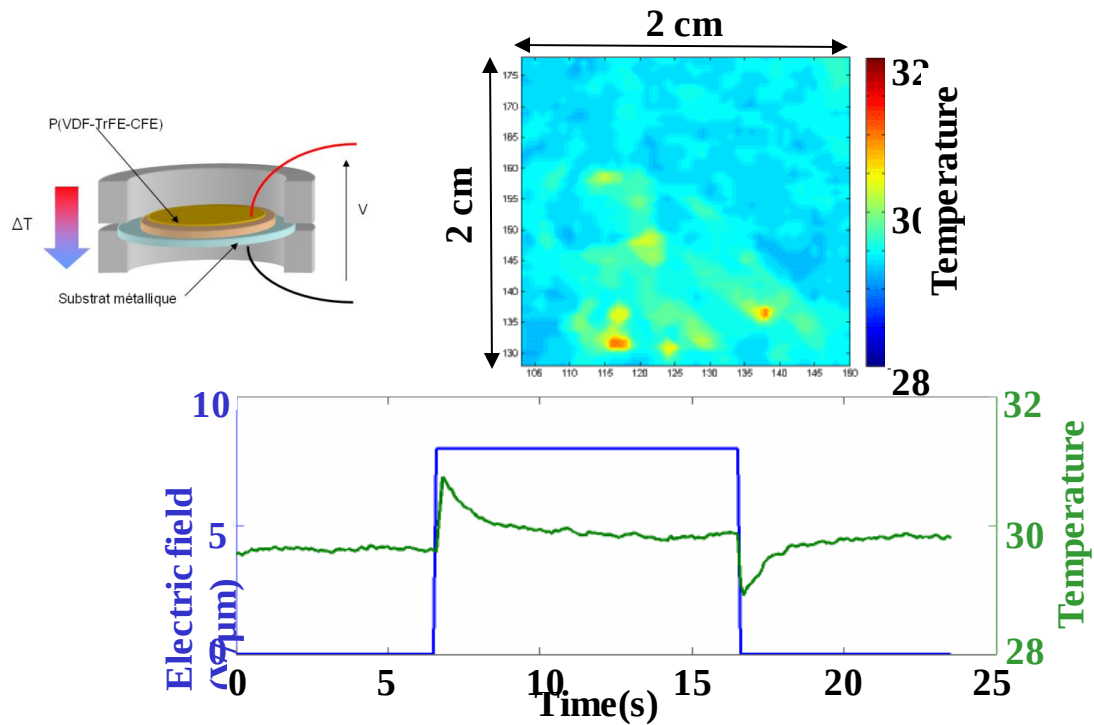
Organic thin film transistor



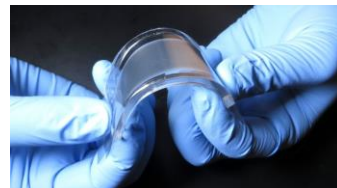


Godard et al. (2020). 1-mW Vibration Energy Harvester Based on a Cantilever with Printed Polymer Multilayers. *Cell Reports Physical Science*, 100068.

Refroidissement Solide



Ma, R. et al. *Science*, 357(6356), 1130-1134



Actionneurs

