



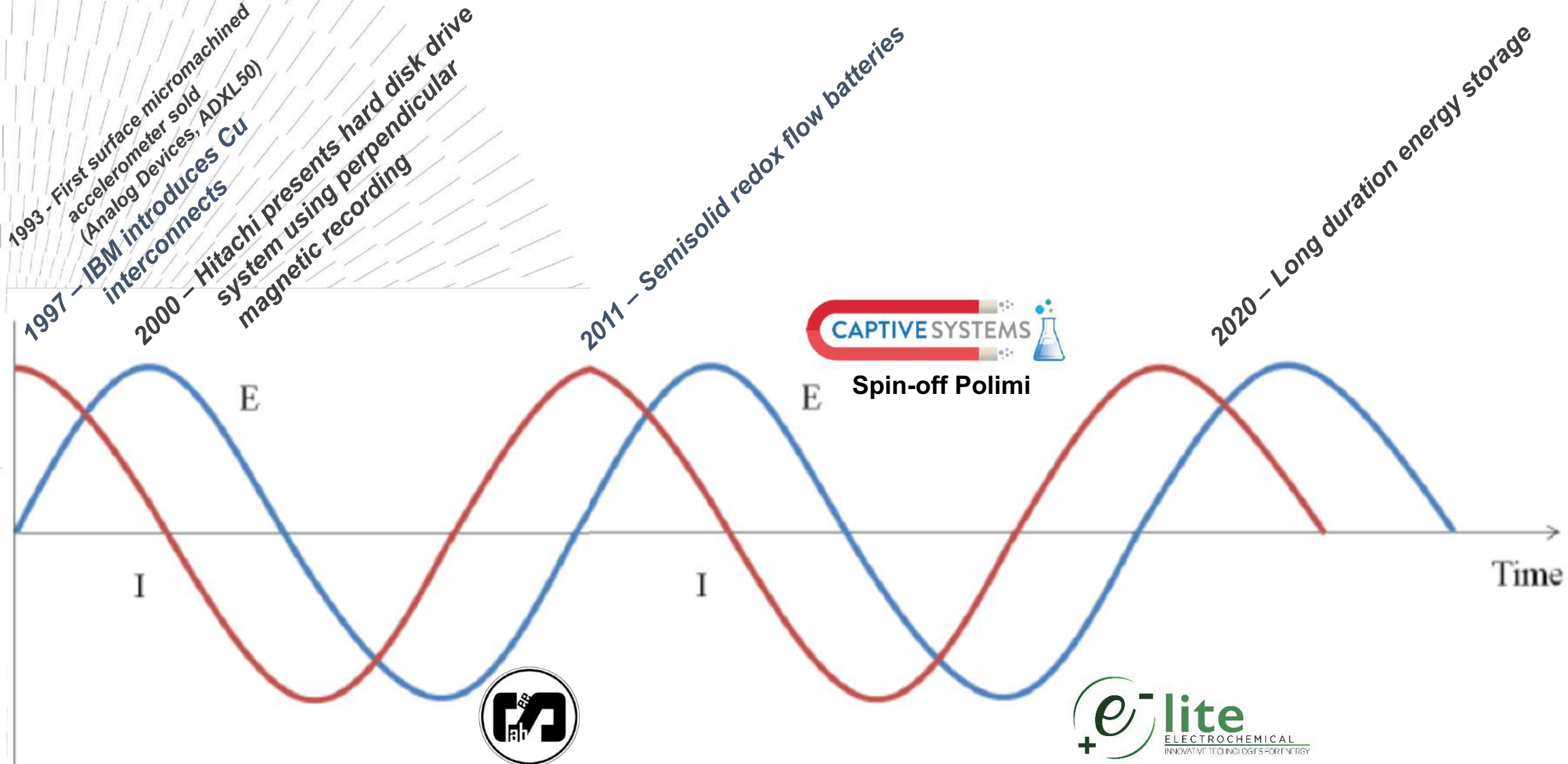
**POLITECNICO**  
MILANO 1863

DIPARTIMENTO DI CHIMICA,  
MATERIALI E INGEGNERIA CHIMICA  
GIULIO NATTA

# FROM GALVANISM TO APPLIED ELECTROCHEMISTRY

Sezione Scienza e Ingegneria dei Materiali

**Luca Magagnin**



Thesis and PhD with IBM  
(P.L. Cavallotti Group)  
UC Berkeley visiting

SEE Lab  
(Magagnin/Nobili)

e-LITE Lab  
(Magagnin/Nobili)



**Luca MAGAGNIN**  
*Professor*



**Luca NOBILI**  
*Professor*



**Maurizio SANSOTERA**  
*RTDb*

**Lab Technician**  
**Fabio PAGANO M.Sc.**

*2008 – today: Supervisor of PhD thesis (9 students) in Materials Engineering PhD program*

*2008 – today: Supervisor of Master (about 160 students) and Bachelor (about 60 students) Thesis*



**Roberto BERNASCONI**  
*RTDa*



**Gabriele PANZERI**  
*PostDoc*



**Alessandra ACCOGLI**  
*PostDoc*



**Eugenio GIBERTINI**  
*3° year Ph.D. Student*



**Claudio MARCHI**  
*3° year Ph.D. Student*



**Luca BERTOLI**  
*2° year Ph.D. Student*



Surface & L  
Electrochemical a  
Engineering b

APPLIED ELECTROCHEMISTRY RESEARCH GROUP  
POLITECNICO DI MILANO



**Ruben DELL'ORO**  
*2° year Ph.D. Student*



**Prisca VIVIANI**  
*2° year Ph.D. Student*



**Matteo SALERNO**  
*2° year Ph.D. Student*



**Piergiorgio MARZIANI**  
*2° year Ph.D. Student*



**Andrea ZAMBERLAN**  
*2° year Ph.D. Student*



*President Italian Association of Metal Finishing*

**ENABLE**  
FP7-SME-2010-1



**HARDALT**  
FP7-SME-AGS-2013



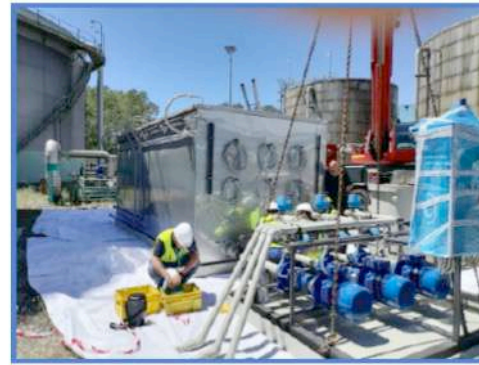
**PROCETS**  
H2020-NMP-PILOTS-2015



**PURENANO**  
H2020-SC5-2018-2



**LIGHTME**  
H2020-NMBP-HUBS-2018

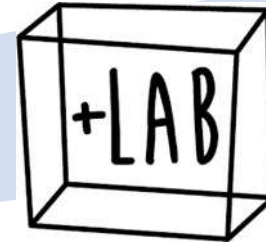


@In field metallization of pipelines

@Gas sensors

Laboratorio  
fattometrico

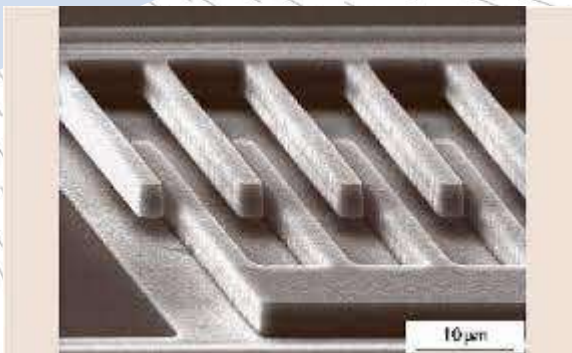
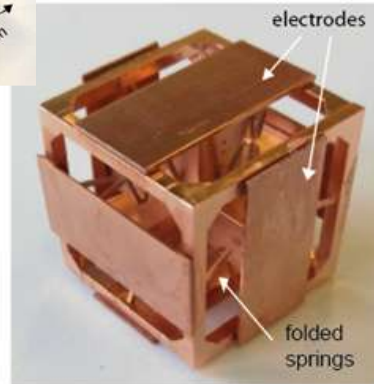
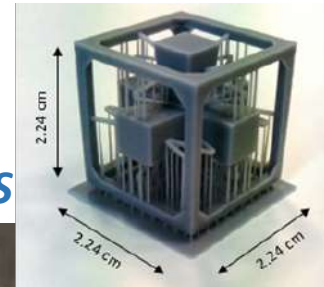
LaBS -  $\mu$ BIOmechL



**MSRL**  
MULTI-SCALE ROBOTICS LAB

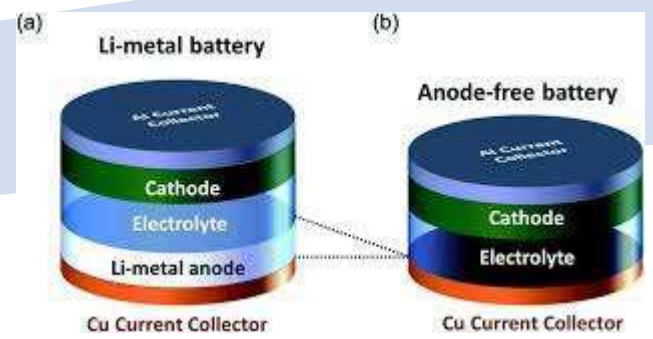
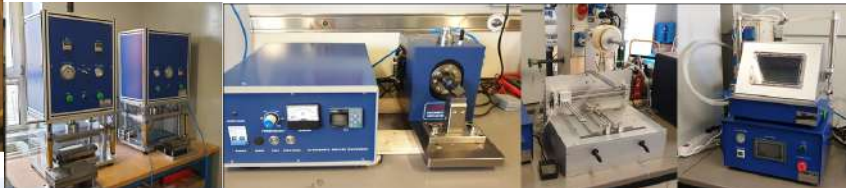
**MEMS** modelling and design group

@Microrobots and printed MEMS

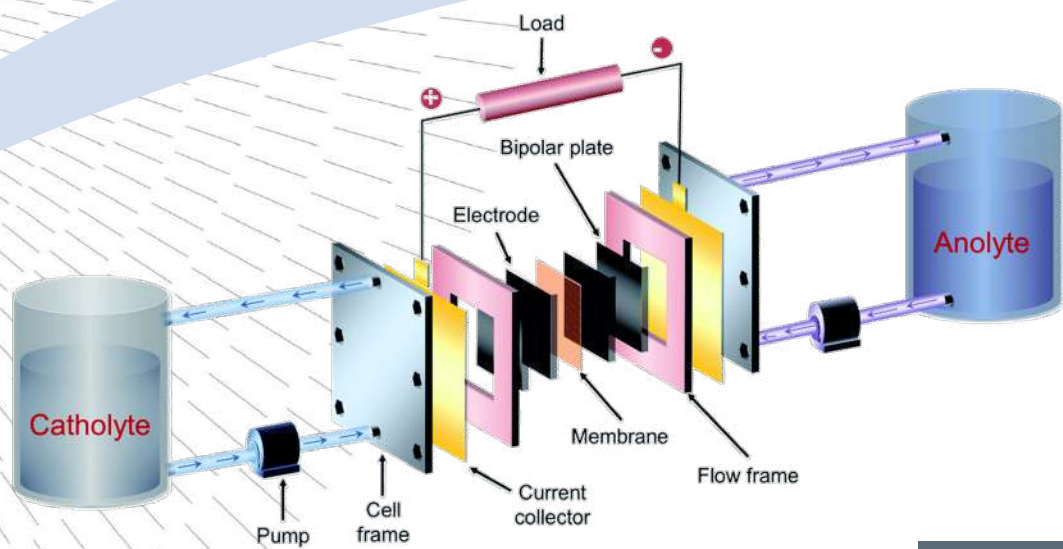


@Stiction phenomena in MEMS

*Electrochemistry of metals  
 and electroplating*

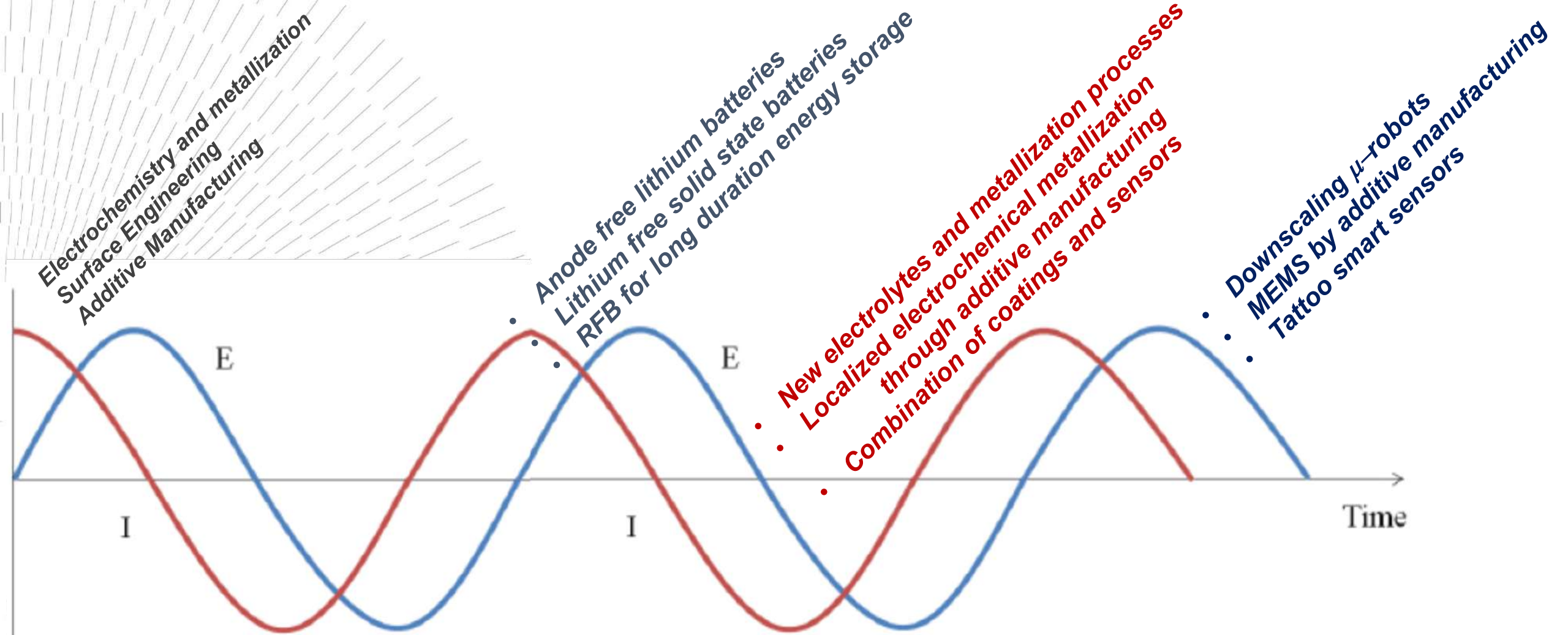


*Anode free lithium batteries*



*Metal base redox flow batteries*

- ✓ 6 patents
- ✓ ENI Joule prize at S2P 2020 with the project **LIFT ENERGY** – 35k€
- ✓ S2P and ENI Joule 2020 prize with the project **SINERGY** – 70k€



**Master Degree - Surface Engineering**  
**Courses: - Materials for Electronics**

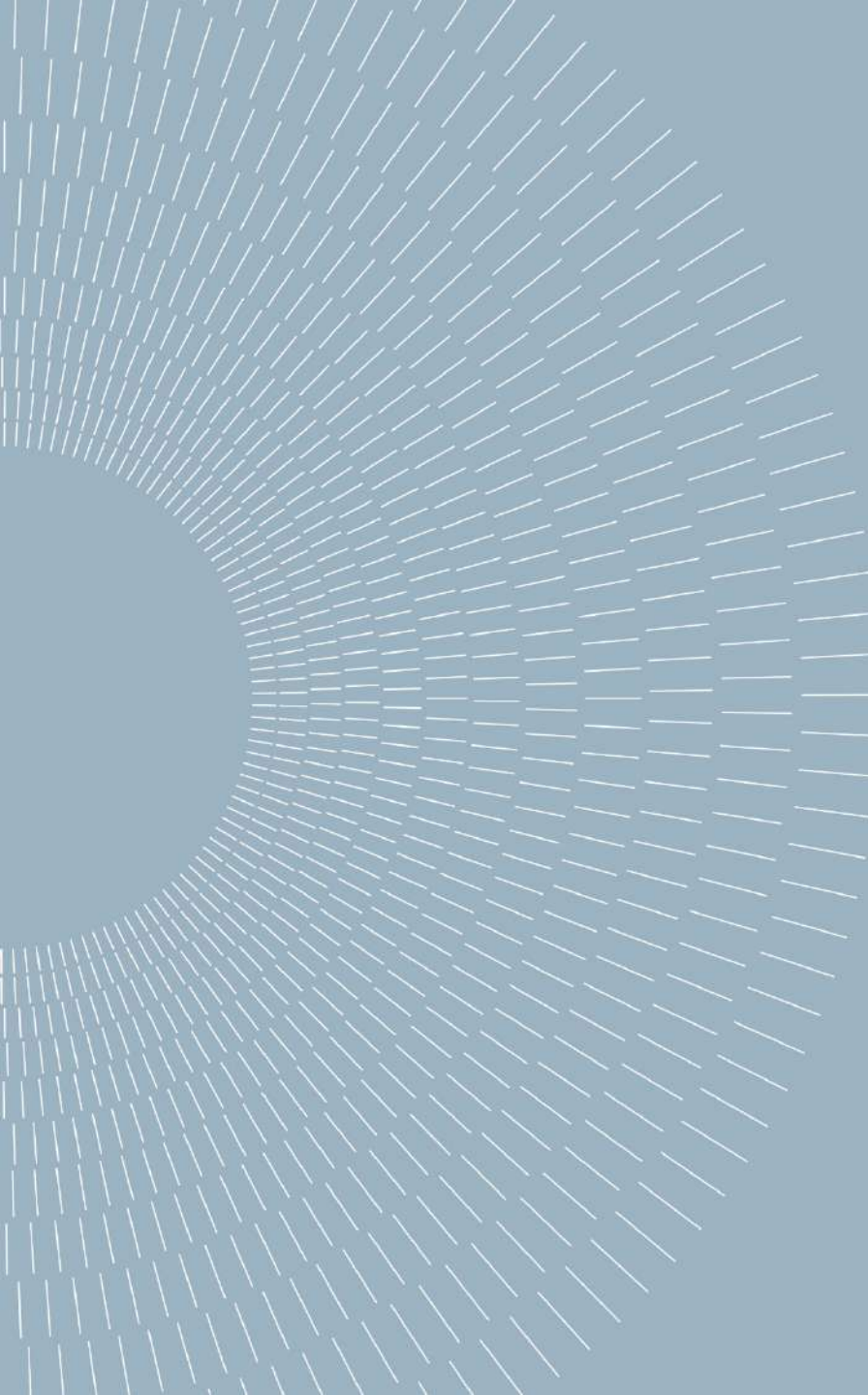
**- Applied Electrochemistry**  
**- Lithium Batteries and Beyond**

**Digital twin technology**  
**in engineering education**



**FLUORITECH**





**...just electrons across interfaces  
but still with unexpected  
phenomena and uses...**





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