

## Master Nanosciences et nanotechnologies

### Hybrid electronics 2 - microfabrication and energy storage

Responsable	Descriptions	Informations
Fabienne MICHELINI (Responsable de l'enseignement) fabienne.michelini@univ-amu.fr	Code : SNNC52G Nature : Élément constitutif Domaines : Sciences et Technologies	Composante : Faculté des Sciences

#### Langue(s) d'enseignement

Anglais

#### Contenu

Course taught in English.

The first part of the course is dedicated to the principle of electrochemical energy storage for flexible microelectronics. It will be presented recent progress achieved in the field of Li-ion microbatteries. The principles will be explained in terms of basic electrochemistry and thermodynamics. The relationship between properties at the atomic level with the performance of the power sources will be highlighted. Particularly, an insight into the use of nanostructured materials to improve the storage capacity, rate capability, and cyclability will be given. The second part of the course is dedicated to the microfabrication processes. It will be given by 3 foreign professors from renowned universities It will be presented recent progress achieved in the field of microtechnologies (high resolution patterning techniques, self-assembly processes, atomic layer deposition techniques, etc.). Particularly, an insight into micropatterned surfaces will be given for modern applications including sensors, biosensors, energy production and storage systems, lab-on-a-chip, smart devices...

#### VOLUME HORAIRE

- Volume total: 18 heures
- Cours magistraux: 12 heures
- Travaux dirigés: 6 heures

#### Codes Apogée

- SNNC52GJ [ELP]

#### M3C

Aucune donnée M3C trouvée

#### Pour plus d'informations

[Aller sur le site de l'offre de formation...](#)



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