



Phy 582



Current trends in materials science

École Polytechnique

January-March 2021, mostly tuesdays, 13h30-17h30

Program

January 5th: **Thierry Gacoin** (Ecole Polytechnique), *Matériaux hybrides organiques/inorganiques*

January 12th: **Dipankar Das Sarma** (Indian Institute of Technology), *Electronic structure of transition metal oxides*

January 19th: **Jean-Baptiste d'Espinose** (ESPCI Paris), *Concrete, a material to meet environmental challenges* / **Philippe Block** (ETH Zürich), *Sustainable Digital Concrete Construction*

January 25th, 8h30-12h45 (**unusual day and time!**): **Jacques Peretti** (LPMC, Ecole Polytechnique), *LED's for lighting : some fundamental problems for important technological issues*

February 2nd: **Bruno Clair** (LMGC, Montpellier), *Wood as a building material* / **Antoine le Duigou** (IRDL, Lorient) *Natural fibre composites : from mechanical to smart functionalities*

February 9th: **Philippe Goldner** (Chimie Paris), *Rare-earths for quantum computing*

February 23rd: **Sylvain Patinet** (ESPCI Paris), *Atomic-scale plasticity and multi-scale modeling: crystalline vs amorphous materials* / **Jérôme Weiss** (ISTerre, Grenoble), *From ice to metals and alloys: fluctuations and size effects in crystalline plasticity*

March 2nd: **Jean-Marc Flesselles** (Saint-Gobain), *Scientific and technical challenges in the making of glass wool insulating materials* / **Damien Durville** (MSSMAT, CentraleSupélec) *Numerical simulation of the mechanical behavior of fibrous materials*

March 4th 8h30-12h45 (**unusual day and time!**): **Giuseppe Leo** (Univ. Paris Diderot), *Optical metamaterials*