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## Toward Room Temperature Superconductivity in high-pressure hydrides

The discovery of “almost room temperature” superconductivity in a high-pressure hydride, LaH<sub>10</sub>, [1] is a spectacular demonstration of a new approach to search for superconductors, which combines high pressures, computational methods for crystal structure prediction and superconductivity. [2]

In my talk, I will review the current theoretical understanding of the field of superconductivity in high-pressure hydrides and propose possible strategies to improve the superconducting properties. [3]

[1] A.P. Drozdov et al., Nature 525 (2015) and Nature 2019; M. Somayazulu et al., Phys. Rev. Lett. 122, 027001 (2019).

[2] D. Duan, et al, Sci. Rep. 4 (2014); F. Peng, et al., Phys. Rev. Lett. 119, 107001 (2017).

[3] L. Boeri, G.B. Bachelet, Journal of Physics Condensed Matter, 31, 234002 (2019); J.A. Flores-Livas, L. Boeri, A. Sanna, G. Profeta, R. Arita, M. Eremets, “A Perspective on Conventional High-Temperature Superconductors at High Pressure: Methods and Materials”, and refs therein.

### Choix de session parallèle

1.2 La supraconductivité par couplage électron-phonon dans les composé à éléments légers: vers la température ambiante?

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**Session Classification:** Séance Parallèle