



Hat trick of research highlights in Nature Physics

Ultracold Quantum Gases group features 3 papers in last issue of *Nature Physics*

March 26, 2018

Mixtures of Bose-Einstein condensates constitute ideal systems for quantum simulation. They give access to fundamental condensed matter phenomena and allow the creation of ultradilute quantum liquid droplets and the study of the real time formation of quasi-particles, to cite just two examples

This month's issue of *Nature Physics* highlights three papers on quantum simulation with mixtures of Bose-Einstein condensates by the ICFO Ultracold Quantum Gases group led by Prof Leticia Tarruell. All three papers were published during the first trimester of 2018. In a

News and Views article, D. S. Petrov (CNRS and Université Paris Sud) reviews the two experimental ICFO papers reporting the observation of quantum liquid droplets, which were published in January and will appear in March in *Science* and *Physical Review Letters*, respectively. In a Research Highlight, Y. Li (Nature Physics editor) discusses a theoretical proposal for the creation of magnetic polarons and the interferometric observation of the polaronic cloud that appeared in February as Rapid Communication in *Physical Review B*. This work was carried out in collaboration with the group of E. Demler (Harvard University).