



Nanophotonics to detect doping, in El Pais

The newspaper features research carried out at ICFO on highly accurate detection of chemical substances

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The newspaper El Pais features research carried out by ICFO researchers [Dr. Mark Kreuzer](#), [Dr. Romain Quidant](#), and [Prof. Goncal Badenes](#), together with CSIC researcher Dr Pilar Marco, about a quantitative mechanism to determine the quantity of an anabolic agent called stanozolol.

The scientists have developed a very precise and practical biosensor to detect selected substances in humans and animals. The research is based on new photonic properties of gold nanoparticles. Through the use of localised surface plasmons (LSPs), sustained by three-dimensional noble metal nano-structures, scientists have developed a highly specific, label-less immunosensor for the detection of this small organic molecule to low levels. A

main practical advantage is the simplicity of the optical configuration. In addition, the active area of the LSP-based sensor is smaller, decreasing the minimum detectable number of molecules involved in the binding event.



(left-right) Gregory Kozyreff, Michal Micuda, Jonas Larson and Liis Rebane



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