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Hyperfine Spectrometer
A sub-picometer resolution spectrometer in a compact package.

.: Top Stories

Nanostructured Plasmonic Materials Could Provide More Natural Color for Displays

Ultralow-power, ultrahigh-definition displays and screens that will be easier on the eyes could be possible with technology being developed by researchers at the University of Central Florida (UCF). Their approach illuminates the display by reflecting light from the surrounding environment, rather than by using energy-intensive LEDs to light the display from behind the screen.

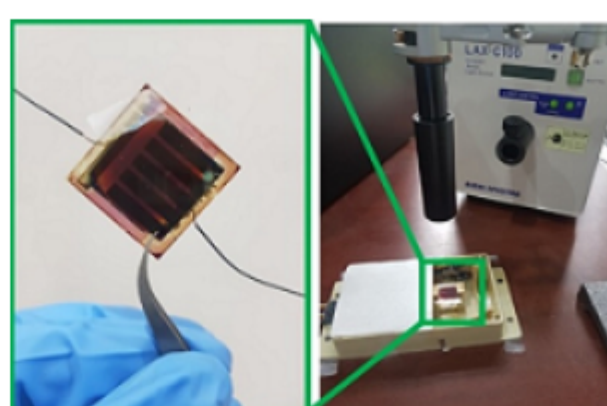
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Smart Windows Self-Illuminate on Rainy Days

A joint research team has developed a technology that will allow windows to change colors according to the amount of moisture, without the need for electricity. The researchers developed a variable color filter using a metal-hydrogel-metal resonator structure using chitosan-based hydrogel, and combined it with solar cells to make a self-powering humidity sensor.

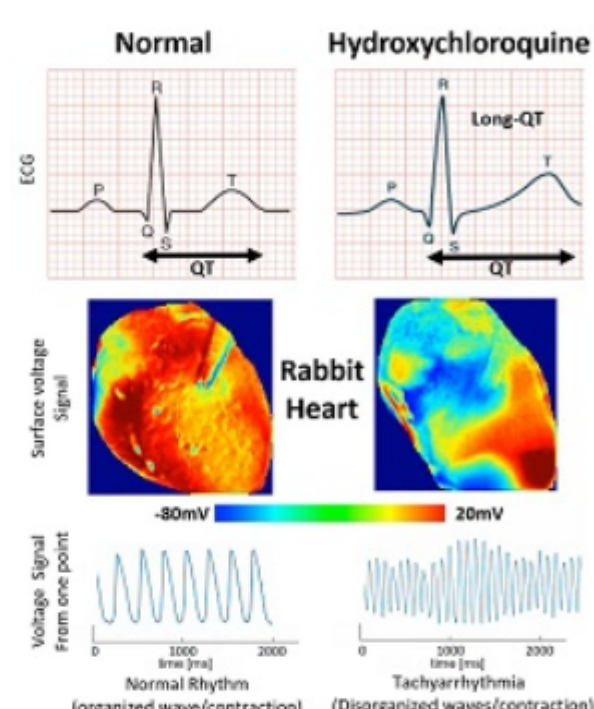
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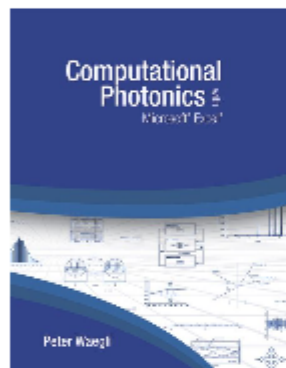
Imaging System Shows Heart Health Risk of HCQ

An optical mapping system has demonstrated that hydroxychloroquine (HCQ) can cause arrhythmia in animals, so researchers and clinicians are cautious about its effectiveness as a treatment of COVID-19 in people. Previously, HCQ, a less toxic form of chloroquine (CQ), has been prescribed to those with malaria and various autoimmune conditions and has showed some promise in reducing COVID-19 symptoms in a limited number of cases.

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Computational Photonics with Microsoft® Excel®

Photonics Media

This book shows how Excel — readily available on almost every computer — can be used to study photonics problems and to design, analyze, and optimize photonics applications. Excel comes with all the necessary ingredients: a full range of mathematical functions, excellent graphics and user-interface capabilities, powerful matrix calculations, and the ability to handle large data sets.

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IR Lenses and Windows for Thermal Cameras

Hangzhou Shalom EO

Thermal camera temperature screenings became an important factor in containing the COVID-19 virus to find elevated body temperature at public places — IR lenses and windows are indispensable parts of thermal cameras. Hangzhou Shalom EO, as an expert IR optics supplier, would like to work with you on resolution of thermal camera optics.

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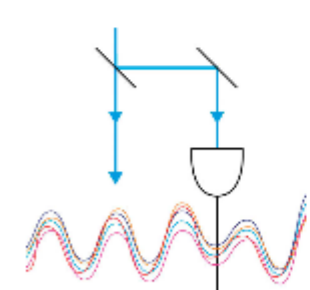
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.: Upcoming Webinars



Optimize the Signal Acquisition for Optics and Photonics Measurements

Tue, Jun 23, 2020 11:00 AM - 12:00 PM EDT

This webinar will focus on four optical measurement techniques: tunable diode laser absorption spectroscopy; pump-probe spectroscopy; stimulated Raman scattering microscopy; and carrier-envelope offset stabilization. By taking a close look at these techniques, you will learn how to choose the most suitable measurement scheme, for example, lock-in amplifier or boxcar averager; perform a measurement; and tune your measurement settings to maximize the signal-to-noise ratio.

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A New Approach to Interferometry: Unlocking New Possibilities in UV/VIS Spectroscopy

Wed, Jun 17, 2020 10:00 AM - 11:00 AM EDT

This webinar will describe ultrastable, common-path (CP) interferometry and how CP interferometry can provide all the advantages of Fourier-transform spectroscopy down to the UV-VIS spectral regions, in a compact device. The operation principle of a CP interferometer will be presented, together with a few applications, such as the measurement of Time-Resolved Emission Spectra (TRES) with picomolar sensitivity and Excitation-Emission Maps (EEM) down to the ultimate sensitivity, by detecting fluorescence/EEM of single molecules at room temperature. Finally, novel applications of the interferometer for hyperspectral imaging will be presented.

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