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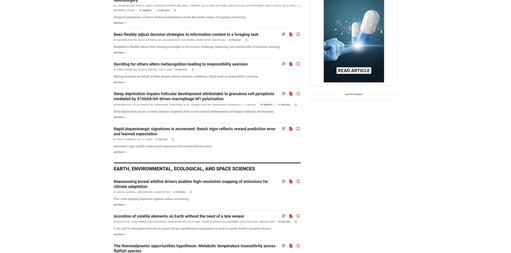

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IMAGE CREDIT: Natural nanoparticles on a metal mirror (NPoM) create well-defined plasmonic nanogaps with extreme light confinement. While these hotspots can ultimately destroy the nanogaps, as shown for ultrasensitive probing, their preserved "tissue" culture has overlooked their potential uses. Liu et al. introduce a platform that merges the safe low-nanometric optical confinement...

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SOCIAL AND INTERDISCIPLINARY SCIENCES AND PUBLIC HEALTH

How do you measure a threat in the air? Testing the universal, dynamic, and multifaceted nature of social identity threat
BY JOSHUA M. BECKER, MICHAEL T. SCHMITT, DIANE M. QUINN, MICHAEL J. PRICE, DAVID HALL, KATHERINE L. CHRISTENSEN, CHRISTINA CHIRITZA, MARIA KONSTANTINA, MARIELLE ... | 10.1126/SCIADV.ADJ1 | 27 FEB 2024 | 0 AUTHORS

Using the RITC browser, and identity threat is shown to be dynamic, multifaceted, and readily activated.

Deciding for others alters metacognition leading to responsibility aversion
BY KARIM SAID BENSAID, NICOLAS CLAIDIÈRE, TEVFIK GÖRGEN | 10.1126/SCIADV.ADL1 | 27 FEB 2024

Making decisions on behalf of other people reduces decision confidence, which leads to responsibility aversion.

Sleep deprivation impairs follicular development attributable to granulosa cell pyroptosis mediated by S100A8/A9-driven macrophage M1 polarization
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Sleep deprivation causes extensive immune responses that worsen ovarian inflammation and impair follicular development.

Rapid dopaminergic signatures in movement: Reach vigor reflects reward prediction error and learned expectation
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Movement vigor rapidly tracks reward signatures of reward prediction error.

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Fire emissions mapping improves regional carbon accounting.

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S, Se, and Te chronophiles behave in several silicate equilibration experiments to match the bulk silicate Earth's concentrations.

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Flatfish metabolism is temperature insensitive, supporting an evolutionary explanation rather than a thermodynamic constraint.

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This ~20 TW fraction from heat sink is commonly omitted from ocean and coupled climate models.

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Limits are established on the validity of Leo Landau's prediction for existence of transverse sound in a Fermi liquid.

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Optical logic convolutional neural network
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Nonresonant exceptional points enable ultrasensitive sensing that is robust to noise and immune to undesired local imperfections.

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