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Deterministically Encoding Quantum Parameter Space Compression Underlies Quantum Limit of Heat Flow Across a Fusion C. B. Machta et al. A scheme is demonstrated for coherently mapping the state of a single superconducting qubit onto a large number of photons. http://dx.doi.org/10.1126/science.1243417

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Pacific Ocean Heat Content During the Past 10,000 Years Y. Rosenthal et al. Marine records show how ocean heat content has varied in step with climate over the past 10,000 years.

Reconstructing the Microbial Diversity and Function of Pre-Agricultural Tallgrass Prairie Soils in the United States N. Fierer et al. Analysis of microbiota in prairie soil relicts offers insights into the ecological function of a near-extinct biome.

Structural Basis for flg22-Induced Activation of the Arabidopsis FLS2-BAK1 Immune Complex Y. Sun et al. The molecular basis for how a plant heterodimeric receptor responds to bacterial infection signals is elucidated.

Regulation of Temperature-Responsive Flowering by MADS-Box Transcription Factor Repressors J. H. Lee et al. A warm spring favors early flowering by invoking less transcriptional repression by a floral repressor complex.

Mosaic Copy Number Variation in Human Neurons M. J. McConnell et al. Single-cell genomics reveals that individual adult human neurons acquire diverse individual genomes.

Resident Neural Stem Cells Restrict Tissue Damage and Neuronal Loss After Spinal Cord Injury in Mice H. Sabelström et al. Glial scarring helps to maintain the integrity of the injured spinal cord in mice.

Real-Space Identification of Intermolecular Bonding with Atomic Force Microscopy J. Zhang et al. An atomic force microscope tip bearing a single carbon monoxide molecule was used to resolve hydrogen bonding contacts between molecules.

Deterministically Encoding Quantum Information Using 100-Photon Schrödinger Cat States B. Vlastakis et al. A scheme is demonstrated for coherently mapping the state of a single superconducting qubit onto a large number of photons.

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