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Titolo	Report [[electronic resource] /] / Columbia Accident Investigation Board
Pubbl/distr/stampa	Houston, Tex. : , : Columbia Accident Investigation Board Washington, D.C. : , : National Aeronautics and Space Administration, , 2003
Soggetti	Space shuttles - Accidents - Investigation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from title screen (viewed Oct. 28, 2003). "August 2003"--V. 1; "October 2003"--V. 2-6. Paper version for sale by the Supt. of Docs., U.S. G.P.O. Distributed to depositories in paper (v. 1-6 : ill. ; 28 cm. + 1 CD-ROM in pocket, v.1-2), shipping list no.: 2004-0015-P (v. 1), 2004-0030-S (v. 2,5), 2004-0125-P (v. 3-4,6), and on DVD (DVD drive required), shipping list no.: 2004-0019-E.
Nota di bibliografia	Includes bibliographical references.

2. Record Nr. UNINA9911034946803321

Autore	Ilyas Batyr
Titolo	Coherent Terahertz Control and Ultrafast Spectroscopy of Layered Antiferromagnets / / by Batyr Ilyas
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	3-032-00082-3
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (269 pages)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5061
Disciplina	538
Soggetti	Magnetism Spectrum analysis Photonics Condensed matter Materials - Analysis Quantum statistics Spectroscopy Ultrafast Photonics Phase Transitions and Multiphase Systems Materials Characterization Technique Quantum Fluids and Solids
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Ultrafast phenomena in quantum materials -- Layered magnets A highly tunable platform of magnetism -- THz field induced metastable magnetization near criticality in FePS35 Time of flight detection of terahertz phonon polariton -- Coherent detection of hidden magnetostriction effect -- Magnetically brightened dark electron-phonon bound states -- Discovery of monolayer van der Waals multiferroic.
Sommario/riassunto	This thesis presents new insights into the strong interactions among electronic, lattice, spin, and orbital degrees of freedom in layered magnetic materials, as well as their emergent properties. Using a suite of spectroscopic techniques, both in equilibrium and out-of-

equilibrium settings, several important findings have been made. In a family of transition metal thiophosphates, a novel bound state resulting from electronic transitions between d-orbitals and Raman-active phonons was observed in NiPS3, using femtosecond transient absorption spectroscopy. Furthermore, this phonon symmetry was employed to identify a new magnetostrictive effect in FePS3 through coherent phonon spectroscopy. These and other observations point to strong interactions between spin and lattice degrees of freedom in this system. This coupling has been harnessed to actively control the magnetic structure. Specifically, intense, tailored terahertz pulses were used to displace the lattice along particular phonon directions, inducing a new magnetic order characterized by net magnetization. This effect is notably more efficient and exhibits an increasingly longer lifetime near the phase transition point, highlighting the key role played by critical fluctuations. Finally, second harmonic generation, linear dichroism, and Raman spectroscopy were employed to discover a new type-II multiferroic phase that persists down to the atomic monolayer limit in NiI2.