

List of Publications 2009

-
- [1] A. Audouard, C. Jaudet, D. Vignolles, R. X. Liang, D. A. Bonn, W. N. Hardy, L. Taillefer, and C. Proust, “Multiple quantum oscillations in the de Haas-van Alphen spectra of the underdoped high-temperature superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{6.5}$,” *Physical Review Letters* **103**, 157003 (2009).
 - [2] M. G. Banks, R. K. Kremer, C. Hoch, A. Simon, B. Ouladdiaf, J. M. Broto, H. Rakoto, C. Lee, and M. H. Whangbo, “Magnetic ordering in the frustrated Heisenberg chain system cupric chloride CuCl_2 ,” *Physical Review B* **80**, 024404 (2009).
 - [3] F. Bert, A. Olariu, A. Zorko, P. Mendels, J. C. Trombe, F. Duc, M. A. de Vries, A. Harrison, A. D. Hillier, J. Lord, A. Amato, and C. Baines, “Frustrated magnetism in the quantum Kagome Herbertsmithite $\text{ZnCu}_3(\text{OH})_6\text{Cl}_2$ antiferromagnet,” *Journal of Physics: Conference Series* **145**, 012004 (2009).
 - [4] F. Bielsa, A. Dupays, M. Fouche, R. Battesti, C. Robilliard, and C. Rizzo, “Birefringence of interferential mirrors at normal incidence,” *Applied Physics B-Lasers and Optics* **97**, 457–463 (2009).
 - [5] X. Chaud, J. Noudem, T. Prikhna, Y. Savchuk, E. Haanappel, P. Diko, and C. P. Zhang, “Flux mapping at 77 K and local measurement at lower temperature of thin-wall YBaCuO single-domain samples oxygenated under high pressure,” *Physica C-superconductivity and Its Applications* **469**, 1200–1206 (2009).
 - [6] R. A. Cooper, Y. Wang, B. Vignolle, O. J. Lipscombe, S. M. Hayden, Y. Tanabe, T. Adachi, Y. Koike, M. Nohara, H. Takagi, C. Proust, and N. E. Hussey, “Anomalous criticality in the electrical resistivity of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$,” *Science* **323**, 603 (2009).
 - [7] C. v. Dewitz, F. Hatami, M. Millot, J. M. Broto, J. Leotin, and W. T. Masselink, “Evidence of type-I direct recombination in InP/GaP quantum dots via magnetoluminescence,” *Applied Physics Letters* **95**, 151105 (2009).
 - [8] O. Drachenko, D. V. Kozlov, V. Y. Aleshkin, V. I. Gavrilenko, K. V. Maremyanin, A. V. Ikonnikov, B. N. Zvonkov, M. Goiran, J. Leotin, G. Fasching, S. Winnerl, H. Schneider, J. Wosnitza, and M. Helm, “High-field splitting of the cyclotron resonance absorption in strained $p\text{-InGaAs}/\text{GaAs}$ quantum wells,” *Physical Review B* **79**, 073301 (2009).
 - [9] B. Fauqué, B. Vignolle, C. Proust, J.P. Issi, and K. Behnia, “Electronic instability in bismuth far beyond the quantum limit,” *New Journal of Physics* **11**, 113012 (2009).
 - [10] J. Y. Fortin and A. Audouard, “Random walks and magnetic oscillations in compensated metals,” *Physical Review B* **80**, 214407 (2009).
 - [11] A. Goiran, J. M. Poumirol, M. P. Semtsiv, W. T. Masselink, D. Smirnov, V. V. Rylkov, and J. Leotin, “Magnetospectroscopy of AIP quantum wells,” *Transport and Optical Properties of Nanomaterials* **1147**, 3 (2009).
 - [12] C. Jaudet, J. Levallois, A. Audouard, D. Vignolles, B. Vignolle, R. Liang, D. A. Bonn, W. N. Hardy, N. E. Hussey, L. Taillefer, and C. Proust, “Quantum oscillations in underdoped $\text{YBa}_2\text{Cu}_3\text{O}_{6.5}$,” *Physica B-Condensed Matter* **404**, 354 (2009).
 - [13] A. A. Kapustin, A. A. Shashkin, V. T. Dolgoplov, M. Goiran, H. Rakoto, and Z. D. Kvon, “Spin susceptibility and polarization field in a dilute two-dimensional electron system in (111) silicon,” *Physical Review B* **79**, 205314 (2009).
 - [14] W. Knafo, C. Meingast, A. V. Boris, P. Popovich, N. N. Kovaleva, P. Yordanov, A. Maljuk, R. K. Kremer, H. V. Lohneysen, and B. Keimer, “Ferromagnetism and lattice distortions in the perovskite YTiO_3 ,” *Physical Review B* **79**, 054431 (2009).
 - [15] W. Knafo, C. Meingast, S. Sakarya, N. H. van Dijk, Y. Huang, H. Rakoto, J. M. Broto, and H. V. Lohneysen, “Critical scaling of the magnetization and magnetostriction in the weak itinerant ferromagnet UIr ,” *Journal of the Physical Society of Japan* **78**, 043707 (2009).
 - [16] W. Knafo, S. Raymond, P. Lejay, and J. Flouquet, “Antiferromagnetic criticality at a heavy-fermion quantum phase transition,” *Nature Physics* **5**, 753 (2009).
 - [17] Y. Kopelevich, B. Raquet, M. Goiran, W. Escoffier, R. R. da Silva, J. C. M. Pantoja, I. A. Luk’yanchuk, A. Sinchenko, and P. Monceau, “Searching for the fractional quantum Hall effect in graphite,” *Physical Review Letters* **103**, 116802 (2009).
 - [18] Y. I. Latyshev, A. P. Orlov, A. Y. Latyshev, A. M. Smolovich, P. Monceau, and D. Vignolles, “Recent experiments on interlayer tunneling spectroscopy and transverse electric field effect in NbSe_3 ,” *Physica B-Condensed Matter* **404**, 399 (2009).
 - [19] J. Levallois, K. Behnia, J. Flouquet, P. Lejay, and C. Proust, “On the destruction of the hidden order in URu_2Si_2 by a strong magnetic field,” *Euro Physics Letters* **85**, 27003 (2009).
 - [20] O.J. Lipscombe, B. Vignolle, T.G Perring, C.D. Frost, and S.M. Hayden, “Emergence of coherent magnetic excitations in the high temperature underdoped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ superconductor at low temperatures,” *Physical Review Letters* **102**, 167002 (2009).
 - [21] G. P. Lousberg, J. F. Fagnard, E. Haanappel, X. Chaud, M. Ausloos, B. Vanderheyden, and P. Vanderbemden, “Pulsed-field magnetization of drilled bulk high-temperature superconductors: flux front propagation in the volume and on the surface,” *Superconductor Science & Technology* **22**, 125026 (2009).
 - [22] T. T. A. Lummen, C. Strohm, H. Rakoto, A. A. Nugroho, and P. H. M. van Loosdrecht, “High-field recovery of the undistorted triangular lattice in the frustrated metamagnet CuFeO_2 ,” *Physical Review B* **80** (2009).
 - [23] C. Meingast, Q. Zhang, T. Wolf, F. Hardy, K. Grube, W. Knafo, P. Adelmann, P. Schweiss, and H. von Lohneysen, “Resistivity of $\text{Mn}_{1-x}\text{Fe}_x\text{Si}$ Single Crystals: Evidence for Quantum Critical Behavior,” *Properties and Applications of Thermoelectric Materials*, 261 (2009).

- [24] M. Millot, S. George, F. Hatami, W. T. Masselink, J. Leotin, J. Gonzalez, and J. M. Broto, "Photoluminescence of InP/GaP quantum dots under extreme conditions," *High Pressure Research* **29**, 488–494 (2009).
- [25] M. Millot, S. Gilliland, J. M. Broto, J. Gonzalez, J. Leotin, A. Chevy, and A. Segura, "High pressure and high magnetic field behaviour of free and donor-bound-exciton photoluminescence in InSe," *Physica Status Solidi B-Basic Solid State Physics* **246**, 532 (2009).
- [26] S. Nanot, R. Avriller, W. Escoffier, J. M. Broto, S. Roche, and B. Raquet, "Propagative Landau states and Fermi level pinning in carbon nanotubes," *Physical Review Letters* **103**, 256801 (2009).
- [27] S. Nanot, W. Escoffier, B. Lassagne, J. M. Broto, and B. Raquet, "Exploring the electronic band structure of individual carbon nanotubes under 60 T," *Comptes Rendus Physique* **10**, 268 (2009).
- [28] A. Patane, W. H. M. Feu, O. Makarovskiy, O. Drachenko, L. Eaves, A. Krier, Q. D. Zhuang, M. Helm, M. Goiran, and G. Hill, "Effect of low nitrogen concentrations on the electronic properties of $\text{InAs}_{1-x}\text{N}_x$," *Physical Review B* **80**, 115207 (2009).
- [29] G. Quirion, M. L. Plumer, O. A. Petrenko, G. Balakrishnan, and C. Proust, "Magnetic phase diagram of magneto-electric CuFeO_2 in high magnetic fields," *Physical Review B* **80**, 064420 (2009).
- [30] C. Robilliard, B. Pinto Da Souza, F. Bielsa, J. Mauchain, M. Nardone, G. Bailly, M. Fouche, R. Battesti, and C. Rizzo, "The BMV project: Search for photon oscillations into massive particles," *Canadian Journal of Physics* **87**, 735–741 (2009).
- [31] V. V. Rylkov, B. A. Aronzon, A. S. Lagutin, V. V. Podol'skii, V. P. Lesnikov, M. Goiran, J. Galibert, B. Raquet, and J. Leotin, "Transport features in laser-plasma-deposited InMnAs layers in strong magnetic fields," *Journal of Experimental and Theoretical Physics* **108**, 149 (2009).
- [32] J. Shaver, A. N. G. Parra-Vasquez, S. Hansel, O. Portugall, C. H. Mielke, M. von Ortenberg, R. H. Hauge, M. Pasquali, and J. Kono, "Alignment dynamics of single-walled carbon nanotubes in pulsed ultrahigh magnetic fields," *Acs Nano* **3**, 131 (2009).
- [33] J. Shaver, A. Srivastava, J. Kono, S. A. Crooker, H. Htoon, V. I. Klimov, J. A. Fagan, E. K. Hobbie, N. Ubrig, O. Portugall, V. Perebeinos, and P. H. Avouris, "High field magneto-optical spectroscopy of highly aligned individual and ensemble single-walled carbon nanotubes," *International Journal of Modern Physics B* **23**, 2667–2675 (2009).
- [34] N. J. O. Silva, A. Millan, F. Palacio, E. Kampert, U. Zeitler, H. Rakoto, and V. S. Amaral, "Temperature dependence of antiferromagnetic susceptibility in ferritin," *Physical Review B* **79**, 104405 (2009).
- [35] L. Thilly, S. Van Petegem, P. O. Renault, F. Lecouturier, V. Vidal, B. Schmitt, and H. Van Swygenhoven, "A new criterion for elasto-plastic transition in nanomaterials: Application to size and composite effects on Cu-Nb nanocomposite wires," *Acta Materialia* **57**, 3157 (2009).
- [36] R. Valiente, M. Millot, F. Rodriguez, J. Gonzalez, J. M. Broto, S. George, S. Garcia-Revilla, Y. Romanyuk, and M. Pollnau, " Er^{3+} luminescence as a sensor of high pressure and strong external magnetic fields," *High Pressure Research* **29**, 748–753 (2009).
- [37] V. Vidal, L. Thilly, S. Van Petegem, U. Stuhr, F. Lecouturier, P. O. Renault, and H. Van Swygenhoven, "Plasticity of nanostructured Cu-Nb-based wires: Strengthening mechanisms revealed by in situ deformation under neutrons," *Scripta Materialia* **60**, 171 (2009).
- [38] D. Vignolles, A. Audouard, V. N. Laukhin, E. Canadell, T.G. Prokhorova, and E. B. Yagubskii, "Indications for the coexistence of closed orbit and quantum interferometer with the same cross section in the organic metal β "-(ET)₄(H_3O)[$\text{Fe}(\text{C}_2\text{O}_4)_3$] $\cdot\text{C}_6\text{H}_4\text{Cl}_2$: Persistence of shubnikov-de haas oscillations above 30 K," *European Physical Journal B* **71**, 203–209 (2009).
- [39] G.H. Wagnières and G.L.J.A. Rikken, "Chirality and magnetism: Free electron on an infinite helix, NCD, MCD, and magnetochiral dichroism," *Chem. Phys. Lett.* **481**, 166 (2009).
- [40] S. Yoshii, K. Ohoyama, K. Kurosawa, H. Nojiri, M. Matsuda, P. Frings, F. Duc, B. Vignolle, G. L. J. A. Rikken, L. P. Regnault, S. Michimura, and F. Iga, "Neutron diffraction study on the multiple magnetization plateaus in TbB_4 under pulsed high magnetic field," *Physical Review Letters* **103**, 077203 (2009).
- [41] A. Zorko, S. Nellutla, J. van Tol, L.C. Brunel, F. Bert, F. Duc, J.-C. Trombe, and P. Mendels, "Electron spin resonance investigation of the spin-1/2 kagomé antiferromagnet $\text{ZnCu}_3(\text{OH})_6\text{Cl}_2$," *Journal of Physics: Conference Series* **145**, 012014 (2009).