

## List of Publications 2013

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- [1] B. Albertazzi, J. Béard, A. Ciardi, T. Vinci, J. Albrecht, J. Billette, T. Burris-Mog, S. N. Chen, D. Da Silva, S. Dittrich, T. Herrmannsdorfer, B. Hirardin, F. Kroll, M. Nakatsutsumi, S. Nitsche, C. Riconda, L. Romagnani, H.-P. Schlenvoigt, S. Simond, E. Veillot, T. E. Cowan, O. Portugall, H. Pepin, and J. Fuchs, “Production of large volume, strongly magnetized laser-produced plasmas by use of pulsed external magnetic fields,” *Review of Scientific Instruments* **84**, 043505 (2013).
  - [2] J. A. Alexander-Webber, A. M. R. Baker, T. J. B. M. Janssen, A. Tzalenchuk, S. Lara-Avila, S. Kubatkin, R. Yakimova, B. A. Piot, D. K. Maude, and R. J. Nicholas, “Phase Space for the Breakdown of the Quantum Hall Effect in Epitaxial Graphene,” *Physical Review Letters* **111**, 096601 (2013).
  - [3] D. Aoki, W. Knafo, and I. Sheikin, “Heavy fermions in a high magnetic field,” *Comptes Rendus Physique* **14**, 53 – 77 (2013), “Physics in High Magnetic Fields / Physique en champ magnétique intense”.
  - [4] A. Audouard and J.-Y. Fortin, “Organic conductors in high magnetic fields: Model systems for quantum oscillation physics,” *Comptes Rendus Physique* **14**, 15 – 26 (2013), “Physics in High Magnetic Fields / Physique en champ magnétique intense”.
  - [5] A. Audouard, J.-Y. Fortin, D. Vignolles, R. B. Lyubovskii, E. I. Zhilyaeva, R. N. Lyubovskaya, and E. Canadell, “Onsager phase factor of quantum oscillations in the organic metal  $\theta$ -(BEDT-TTF)<sub>4</sub>CoBr<sub>4</sub>(C<sub>6</sub>H<sub>4</sub>Cl<sub>2</sub>),” *Synthetic Metals* **171**, 51–55 (2013).
  - [6] Y. Avila-Torres, H. Lopez-Sandoval, E. Mijangos, L. Quintanar, E. E. Rodriguez, A. Flores-Parra, R. Contreras, R. Vicente, G. L. J. A. Rikken, and N. Barba-Behrens, “Structure and magnetic properties of copper(II) and cobalt(II) coordination compounds derived from optically active tridentate ligands,” *Polyhedron* **51**, 298–306 (2013).
  - [7] J. Béard, J. Billette, P. Frings, M. Suleiman, and F. Lecouturier, “Special Coils Development at the National High Magnetic Field Laboratory in Toulouse,” *Journal of Low Temperature Physics* **170**, 442–446 (2013).
  - [8] J. Béard and F. Debray, “The French High Magnetic Field Facility,” *Journal of Low Temperature Physics* **170**, 541–552 (2013).
  - [9] N. Barisic, S. Badoux, M. K. Chan, C. Dorow, W. Tabis, B. Vignolle, G. Yu, J. Beard, X. Zhao, C. Proust, and M. Greven, “Universal quantum oscillations in the underdoped cuprate superconductors,” *Nature Physics* **9**, 761–764 (2013).
  - [10] A.-L. Barra, M. Goiran, R. Sessoli, and S. A. Zvyagin, “Resonance THz spectroscopy in high magnetic fields,” *Comptes Rendus Physique* **14**, 106 – 114 (2013), “Physics in High Magnetic Fields / Physique en champ magnétique intense”.
  - [11] R. Battesti, P. Berceau, M. Fouché, G.L.J.A. Rikken, and C. Rizzo, “Quantum vacuum magneto-optics,” *Comptes Rendus Physique* **14**, 27 – 38 (2013), “Physics in High Magnetic Fields / Physique en champ magnétique intense”.
  - [12] R. Battesti and C. Rizzo, “Magnetic and electric properties of a quantum vacuum,” *Reports on Progress in Physics* **76**, 016401 (2013).
  - [13] S. Bhuyan, R. Mondal, P. Khatua, M. Semtsiv, W. T. Masselink, J. Léotin, B. Pal, and B. Bansal, “Light emission despite doubly-forbidden radiative transitions in AlP/GaP quantum wells: Role of localized states,” *Journal of Applied Physics* **114**, 163101 (2013).
  - [14] A. Cadène, D. Sordes, P. Berceau, M. Fouché, R. Battesti, and C. Rizzo, “Faraday and cotton-mouton effects of helium at  $\lambda = 1064$  nm,” *Phys. Rev. A* **88**, 043815 (2013).
  - [15] P. Cheiney, C. M. Fabre, F. Vermersch, G. L. Gattobigio, R. Mathevet, T. Lahaye, and D. Guery-Odelin, “Matter-wave scattering on an amplitude-modulated optical lattice,” *Physical Review A* **87**, 013623 (2013).
  - [16] A. Ciardi, T. Vinci, J. Fuchs, B. Albertazzi, C. Riconda, H. Pepin, and O. Portugall, “Astrophysics of Magnetically Collimated Jets Generated from Laser-Produced Plasmas,” *Physical Review Letters* **110**, 025002 (2013).
  - [17] C. Cobaleda, E. Diez, M. Amado, S. Pezzini, F. Rossella, V. Bellani, D. Lopez-Romero, and D. K. Maude, “Quantum Hall effect in monolayer, bilayer and trilayer graphene,” *20TH INTERNATIONAL CONFERENCE ON THE APPLICATION OF HIGH MAGNETIC FIELDS IN SEMICONDUCTOR PHYSICS (HMF-20)*, *Journal of Physics Conference Series* **456**, 012006 (2013), 20th International Conference on the Application of High Magnetic Fields in Semiconductor Physics (HMF), Chamonix, FRANCE, JUL 22-27, 2012.
  - [18] P. Coddet, C. Verdy, C. Coddet, F. Lecouturier, and F. Debray, “Mechanical properties of Cold Spray deposited NARloy-Z copper alloy,” *Surface and Coatings Technology* **232**, 652 – 657 (2013).
  - [19] P. Coddet, C. Verdy, C. Coddet, F. Lecouturier, and F. Debray, “Comparison of the Properties of Cold-Sprayed Cu<sub>0.5</sub>Cr<sub>0.05</sub>Zr Alloys after Various Heat Treatments Versus Forged and Vacuum Plasma-Sprayed Alloys,” *Journal of Thermal Spray Technology* **0**, 1–6 (2013).
  - [20] F. Debray and P. Frings, “State of the art and developments of high field magnets at the “Laboratoire National des Champs Magnétiques Intenses”,” *Comptes Rendus Physique* **14**, 2 – 14 (2013), “Physics in High Magnetic Fields / Physique en champ magnétique intense”.
  - [21] W. Desrat, B. A. Piot, S. Krämer, D. K. Maude, Z. R. Wasilewski, M. Henini, and R. Airey, “Dispersive line shape in the vicinity of the  $\nu = 1$  quantum hall state: Coexistence of knight-shifted and unshifted resistively detected nmr responses,” *Physical Review B* **88**, 241306 (2013).
  - [22] L. V. B. Diop, O. Isnard, Y. Skourski, and G. Ballon, “Determination of the intersublattice exchange interactions in GdCo<sub>12-x</sub>Fe<sub>x</sub>B<sub>6</sub> (x=0-3) intermetallic compounds by high field magnetization measurements,” *Journal of Applied*

- Physics **113**, 203911 (2013).
- [23] N. Doiron-Leyraud, S. Lepault, O. Cyr-Choiniere, B. Vignolle, G. Grissonnanche, F. Laliberte, J. Chang, N. Barisic, M. K. Chan, L. Ji, X. Zhao, Y. Li, M. Greven, C. Proust, and L. Taillefer, "Hall, Seebeck, and Nernst Coefficients of Underdoped  $\text{HgBa}_2\text{CuO}_{4+\delta}$  : Fermi-Surface Reconstruction in an Archetypal Cuprate Superconductor," *Physical Review X* **3**, 021019 (2013).
- [24] M. Donaire, B. A. van Tiggelen, and G. L. J. A. Rikken, "Casimir momentum of a chiral molecule in a magnetic field," *Physics Review Letters* **111**, 143602 (2013).
- [25] C. Faugeras, W. Knafo, G. Rikken, and J.-L. Tholence, "Foreword," *Comptes Rendus Physique* **14**, 1 (2013), "Physics in High Magnetic Fields / Physique en champ magnétique intense".
- [26] B. Fauque, D. LeBoeuf, B. Vignolle, M. Nardone, C. Proust, and K. Behnia, "Two Phase Transitions Induced by a Magnetic Field in Graphite," *Physical Review Letters* **110**, 266601 (2013).
- [27] M. Floeser, B. A. Piot, C. L. Campbell, D. K. Maude, M. Henini, R. Airey, Z. R. Wasilewski, S. Florens, and T. Champel, "Classical percolation fingerprints in the high temperature regime of the quantum Hall effect," *New Journal of Physics* **15**, 083027 (2013).
- [28] V. A. Gasparov, A. Audouard, L. Drigo, A. I. Rodigin, C. T. Lin, W. P. Liu, M. Zhang, A. F. Wang, X. H. Chen, H. S. Jeevan, J. Maiwald, and P. Gegenwart, "Upper critical magnetic field of  $\text{K}_x\text{Fe}_{2-y}\text{Se}_2$  and  $\text{Eu}_{0.5}\text{K}_{0.5}\text{Fe}_2\text{As}_2$  single crystals," *Physical Review B* **87**, 094508 (2013).
- [29] M.F. Gonzalez-Zalba, J. Galibert, F. Iacovella, D. Williams, and T. Ferrus, "Evidence of magnetic field quenching of phosphorus-doped silicon quantum dots," *Current Applied Physics*, - (2013).
- [30] D. Huevonen, G. Ballon, and A. Zheludev, "Field-concentration phase diagram of a quantum spin liquid with bond defects," *Physical Review B* **88**, 094402 (2013).
- [31] W. Knafo, R. Viennois, G. Ballon, X. Fabreges, F. Duc, C. Detlefs, J. Leotin, and E. Giannini, "High-field irreversible moment reorientation in the antiferromagnet  $\text{Fe}_{1.1}\text{Te}$ ," *Physical Review B* **87**, 020404 (2013).
- [32] S. S. Krishtopenko, V. I. Gavrilenko, and M. Goiran, "Spin-wave excitations and electron spin resonance in symmetric and asymmetric narrow-gap quantum wells," *Physical Review B* **87**, 155113 (2013).
- [33] V. K. Ksenevich, T. A. Dauzhenka, and J. Galibert, "Weak localization and electron-electron interactions in polycrystalline tin dioxide films," *Journal of Physics: Conference Series* **456**, 012022 (2013).
- [34] K. Kuwahara, S. Yoshii, H. Nojiri, D. Aoki, W. Knafo, F. Duc, X. Fabrèges, G. W. Scheerer, P. Frings, G. L. J. A. Rikken, F. Bourdarot, L. P. Regnault, and J. Flouquet, "Magnetic Structure of Phase II in  $\text{U}(\text{Ru}_{0.96}\text{Rh}_{0.04})_2\text{Si}_2$  Determined by Neutron Diffraction under Pulsed High Magnetic Fields," *Physical Review Letters* **110**, 216406 (2013).
- [35] Y. I. Latyshev, A. P. Orlov, P. Monceau, D. Vignolles, S. S. Pershoguba, and V. M. Yakovenko, "Interlayer tunneling spectroscopy of graphite at high magnetic field oriented parallel to the layers," *European Physical Journal-Special Topics* **222**, 1257–1262 (2013).
- [36] D. LeBoeuf, S. Kramer, W. N. Hardy, R. Liang, D. A. Bonn, and C. Proust, "Thermodynamic phase diagram of static charge order in underdoped  $\text{YBa}_2\text{Cu}_3\text{O}_y$ ," *Nature Physics* **9**, 79–83 (2013).
- [37] A. Loubat, W. Escoffier, L.-M. Lacroix, G. Viau, R. Tan, J. Carrey, B. Warot-Fonrose, and B. Raquet, "Cotunneling transport in ultra-narrow gold nanowire bundles," *Nano Research* **6**, 644–651 (2013).
- [38] R. Mathevet, B. V. de Leseigno, L. Pruvost, and G. L. J. A. Rikken, "Negative experimental evidence for magneto-orbital dichroism," *Optics Express* **21**, 3941–3945 (2013).
- [39] A. A. Mitioglu, P. Plochocka, J. N. Jadczak, W. Escoffier, G. L. J. A. Rikken, L. Kulyuk, and D. K. Maude, "Optical manipulation of the exciton charge state in single-layer tungsten disulfide," *Phys. Rev. B* **88**, 245403 (2013).
- [40] R. J. Nicholas, P. Y. Solane, and O. Portugall, "Ultrahigh Magnetic Field Study of Layer Split Bands in Graphite," *Physical Review Letters* **111**, 096802 (2013).
- [41] G. Timothy Noe, Hiroyuki Nojiri, Joseph Lee, Gary L. Woods, Jean Léotin, and Junichiro Kono, "A table-top, repetitive pulsed magnet for nonlinear and ultrafast spectroscopy in high magnetic fields up to 30 T," *Review of Scientific Instruments* **84**, 123906 (2013).
- [42] M. Orlita, W. Escoffier, P. Plochocka, B. Raquet, and U. Zeitler, "Graphene in high magnetic fields," *Comptes Rendus Physique* **14**, 78 – 93 (2013), "Physics in High Magnetic Fields / Physique en champ magnétique intense".
- [43] P. Plochocka, A. A. Mitioglu, D. K. Maude, G. L. J. A. Rikken, A. Granados del Aguila, P. C. M. Christianen, P. Kacman, and Hadas Shtrikman, "High Magnetic Field Reveals the Nature of Excitons in a Single GaAs/AlAs Core/Shell Nanowire," *Nano Letters* **13**, 2442–2447 (2013).
- [44] O. Portugall, P. Y. Solane, P. Plochocka, D. K. Maude, and R. J. Nicholas, "Beyond 100 Tesla: Scientific experiments using single-turn coils," *Comptes Rendus Physique* **14**, 115 – 120 (2013), "Physics in High Magnetic Fields / Physique en champ magnétique intense".
- [45] A. Pourret, A. Palacio-Morales, S. Kraemer, L. Malone, M. Nardone, D. Aoki, G. Knebel, and J. Flouquet, "Fermi Surface Reconstruction inside the Hidden Order Phase of  $\text{URu}_2\text{Si}_2$  Probed by Thermoelectric Measurements," *Journal of the Physical Society of Japan* **82**, 034706 (2013).
- [46] V. Prudkovskiy, M. Berd, E. Pavlenko, K. Katin, M. Maslov, P. Puech, M. Monthieux, W. Escoffier, M. Goiran, and B. Raquet, "Electronic coupling in fullerene-doped semiconducting carbon nanotubes probed by Raman spectroscopy and electronic transport," *Carbon* **57**, 498–506 (2013).
- [47] G. L. J. A. Rikken and B. A. van Tiggelen, "Observation of Displacement Momentum in Normal and Chiral Dielectrics," *Physical Review Letters* **110**, 194301 (2013).
- [48] H. Stork, P. Bontemps, and G. L. J. A. Rikken, "NMR in pulsed high-field magnets and application to high- $T_C$  superconductors," *Journal of Magnetic Resonance* **234**, 30–34 (2013).
- [49] B. A. van Tiggelen, A. Nussle, and G. L. J. A. Rikken, "Transverse momentum transfer in atom-light scattering," *Physical Review A* **87**, 063424 (2013).
- [50] P. Vasek, L. Smrcka, P. Svoboda, M. Ledinsky, V. Jurka, M. Orlita, D. K. Maude, W. Strupinski, R. Stepniowski, and R. Yakimova, "Magnetotransport in graphene on silicon side of SiC," *20TH INTERNATIONAL CONFERENCE ON THE APPLICATION OF HIGH MAGNETIC FIELDS IN SEMICONDUCTOR PHYSICS (HMF-20)*, *Journal*

- of *Physics Conference Series* **456**, 012038 (2013), 20th International Conference on the Application of High Magnetic Fields in Semiconductor Physics (HMF), Chamonix, FRANCE, JUL 22-27, 2012.
- [51] S. I. Vedenev, B. A. Piot, D. K. Maude, and A. V. Sadakov, “Temperature dependence of the upper critical field of FeSe single crystals,” *Physical Review B* **87**, 134512 (2013).
- [52] B. Vignolle, D. Vignolles, M.-H. Julien, and C. Proust, “From quantum oscillations to charge order in high-copper oxides in high magnetic fields,” *Comptes Rendus Physique* **14**, 39 – 52 (2013), “Physics in High Magnetic Fields / Physique en champ magnétique intense”.
- [53] P. Walmsley, C. Putzke, L. Malone, I. Guillamon, D. Vignolles, C. Proust, S. Badoux, A. I. Coldea, M. D. Watson, S. Kasahara, Y. Mizukami, T. Shibauchi, Y. Matsuda, and A. Carrington, “Quasiparticle Mass Enhancement Close to the Quantum Critical Point in  $\text{BaFe}_2(\text{As}_{1-x}\text{P}_x)_2$ ,” *Physical Review Letters* **110**, 257002 (2013).