

Publications – Institute for Quantum Optics

- (1) Mindarava Y, Blinder R, Liu Y, Scheuer J, Lang J, Agafonov V, Davydov V A, Laube C, Knolle W, Abel B, Naydenov B & Jelezko F **(2020)**: Synthesis and coherent properties of ^{13}C -enriched sub-micron diamond particles with nitrogen vacancy color centers. *Carbon*, Volume 65, 395-403
- (2) Lang J, Häußler S, Fuhrmann J, Waltrich R, Laddha S, Scharpf J, Kubanek A, Naydenov B & Jelezko F **(2020)**: Long optical coherence times of shallow-implanted, negatively charged silicon vacancy centers in diamond. *Applied Physics Letters* 116, 064001
- (3) Häußler S, Hartung L, Fehler K G, Antoniuk L, Kulikova L F, Davydov V A, Agafonov V N, Jelezko F & Kubanek A **(2019)**: Preparing single SiV^- center in nanodiamonds for external, optical coupling with access to all degrees of freedom. *New Journal of Physics* 21, 103047
- (4) Genov G T, Aharon N, Jelezko F & Retzker A **(2019)** Mixed dynamical decoupling. *Quantum Science and Technology*, Volume 4, Number 3
- (5) Fehler K G, Ovvyann A P, Gruhler N, Pernice W H P & Kubanek A **(2019)** Efficient Coupling of an Ensemble of Nitrogen Vacancy (NV-) to the Mode of a High-Q, Si_3N_4 Photonic Crystal Cavity. *ACS Nano* 13, 6, 6891-6898
- (6) Metsch M H, Senkalla K, Tratzmiller B, Scheuer J, Kern M, Achard J, Tallaire A, Plenio M B, Siyushev P & Jelezko **(2019)** Initialization and Readout of Nuclear Spins via a Negatively Charged Silicon-Vacancy Center in Diamond. *Phys. Rev. Lett.* **122**, 190503
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- (9) Siyushev P, Nesladek M, Bourgeois E, Gulka M, Hruby J, Yamamoto T, Trupke M, Teraji T, Isoya J & Jelezko F **(2019)** Photoelectrical imaging and coherent spin-state readout of single nitrogen-vacancy centers in diamond. *Science* Vol. 363, Issue 6428, pp. 728-731
- (10) Rogers L J, Wang O, Liu Y, Antoniuk L, Osterkamp C, Davydov V A, Agafonov V N, Filipovski A B, Jelezko F & Kubanek A **(2019)** Single SiV^- centers in low-strain nanodiamonds with bulk-like spectral properties and nano-manipulation capabilities. *Phys. Rev. Applied* 11, 024073
- (11) Dietrich A., Bürk M., Steiger E. S., Antoniuk L., Tran T. T., Nguyen M., Aharonovich I., Jelezko F. & Kubanek A. **(2018)** Observation of Fourier transform limited lines in hexagonal boron nitride. *Phys. Rev. B* 98, 081414(R)
- (12) Unden T., Tomek N., Weggler T., Frank F., London P., Zopes J., Degen C., Raatz N., Meijer J., Watanabe H., Itoh K. M., Plenio M. B., Naydenov B. & Jelezko F. **(2018)** Coherent control of solid state nuclear spin nano-ensemble. *npj Quantum Information* 4, Article number: 39
- (13) Nizovtsev A. P., Kilin S. Ya, Pushkarchuk A. L., Pushkarchuk V. A., Kuten S. A., Zhikol O. A., Schmitt S., Unden T. & Jelezko F. **(2018)** Non-flipping ^{13}C spins near an NV center in diamond: hyperfine and spatial characteristics by

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- (29) Chen Q., Schwarz I., Jelezko F., Retzker A. & Plenio M. B. **(2016)** Resonance-inclined optical nuclear spin polarization of liquids in diamond structures. *Phys. Rev. B* 93, 060408
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