

## Prof. Dr. Fedor Jelezko

*List of publications, patents*

### Patents

1. J.-P. Boudou, P. Curmi; A. Thorel, F. Jelezko, M. Sennour, *Method for manufacturing cubic diamond nanocrystals*, Publication number WO2010102977
2. Daniel. Twitchen, J. Dodson, M. Markham, F. Jelezko *Diamond optical element*, US 20130270991
3. A.Thorel, P. Curmi, J.-P. Boudou, F. Jelezko *Photovoltaic cell including fluorescent diamonds*, WO 2013064784
4. F. Jelezko, I. Shwarz, M. Plenio, A. Retzker, *Method for the hyperpolarisation of nuclear spin in a diamond*, WO2014166883A1

### Books

1. F. Jelezko, J. Wrachtrup *Single defect centers in diamond* in *Physics and Applications of CVD Diamond*", Wiley-VCH (2008)
2. F. Jelezko and J. Wrachtrup *Quantum Information Processing with Defects in Quantum Information Processing* , Thomas Beth and Gerd Leuchs (Editors), Wiley-VCH (2006)
3. J. Wrachtrup, T.J. Aartsma, J. Köhler, M. Ketelaars, A.M. van Oijen, M. Matsushita, J. Schmidt, C. Tietz, F. Jelezko *Spectroscopy of Individual Photosynthetic Pigment-Protein Complexes in: Single-Molecule Detection in Solution*, Zander et al.(Editors), Wiley-VCH (2002)
4. F. Jelezko *Single Spins in Diamond: Novel Quantum Devices and Atomic Sensors* in Prati, E., & Shinada, T. *Single-atom nanoelectronics*. Singapore: Pan Stanford Pub. Pte. Lt (2013)
5. P.G. Baranov, H.J. von Bardeleben, F. Jelezko, J. Wrachtrup *Magnetic Resonance of Semiconductors and Their Nanostructures* Springer (2017)

### Peer reviewed journals

- (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  $^{13}\text{C}$ -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  $\text{SiV}^-$  center in nanodiamonds for external, optical coupling with access to all degrees of freedom. *New Journal of Physics* 21, 103047

- (4) Lee C W Y, Cheng J, Yiu Y C, Chan K, Lau D, Tang W C, Cheng K W, Kong T, Hui T K C & Jelezko F (2020): Correlation between EPR spectra and coloration of natural diamonds. *Diamond & Related Materials*, Volume 103, 107728
- (5) Genov G T, Aharon N, Jelezko F & Retzker A (2019) Mixed dynamical decoupling. *Quantum Science and Technology*, Volume 4, Number 3
- (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
- (7) Osterkamp C, Mangold M, Lang J, Balasubramanian P, Teraji T, Naydenov B & Jelezko F (2019) Engineering preferentially-aligned nitrogen-vacancy centre ensembles in CVD grown diamond. *Scientific Reports*, 9:5786
- (8) 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
- (9) 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
- (10) Rotem A, Gefen T, Oviedo-Casado S, Prior J, Schmitt S, Burak Y, McGuinness L, Jelezko F, & Retzker A (2019) Limits on Spectral Resolution Measurements by Quantum Probes. *Physical Review Letters*, 122(6). doi:ARTN 060503
- (11) Choi J, Zhou H Y, Choi S, Landig R, Ho W W, Isoya J, Jelezko F, Onoda S, Sumiya H, Abanin D A, & Lukin M D (2019) Probing Quantum Thermalization of a Disordered Dipolar Spin Ensemble with Discrete Time-Crystalline Order. *Physical Review Letters*, 122(4). doi:ARTN 043603
- (12) 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)
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