

[1]

M. Sh. Kaviladze, T. R. Mchedlidze, and G. I. Ramendik, “A method for allowing for the width of mass-spectrum lines during analysis on double-focusing photorecording instruments,” *Journal of analytical chemistry of the USSR*, vol. 38, no. 11, pp. 1528–1530, 1983, Accessed: Dec. 05, 2024. [Online]. Available: <https://scholar.google.com/scholar?cluster=8259302938630021356&hl=en&oi=scholarr>

[2]

G. I. Ramendik, O. I. Kryuchkova, M. S. Kaviladze, T. R. Mchedlidze, and D. A. Tyurin, “Dependence of relative sensitivity coefficients in spark-source and laser mass spectrometry on matrix composition and conditions of action on the sample,” *Zhurnal Analiticheskoy Khimii*, vol. 38, no. 10, pp. 1749–1757, 1983, Accessed: Dec. 05, 2024. [Online]. Available: https://inis.iaea.org/search/search.aspx?orig_q=RN:16012724

[3]

G. I. Ramendik, O. I. Kryuchkova, D. A. Tyurin, T. R. Mchedlidze, and M. Sh. Kaviladze, “Factors affecting the relative sensitivity coefficients in spark and laser plasma source mass spectrometry,” *International Journal of Mass Spectrometry and Ion Processes*, vol. 63, no. 1, pp. 1–15, 1985, doi: [10.1016/0168-1176\(85\)87036-1](https://doi.org/10.1016/0168-1176(85)87036-1).

[4]

V. V. Kveder, V. Y. Kravchenko, T. R. Mchedlidze, Y. A. Osip’yan, D. E. Khmel’Nitskiĭ, and A. I. Shalynin, “Combined resonance at dislocations in silicon,” *Soviet Journal of Experimental and Theoretical Physics Letters*, vol. 43, p. 255, 1986, Accessed: Dec. 05, 2024. [Online]. Available: <https://ui.adsabs.harvard.edu/abs/1986JETPL..43..255K/abstract>

[5]

V. V. Kveder, T. R. McHedlidze, I. A. Osip’ian, and A. I. Shalynin, “Microwave-loss characteristics of superconducting ceramic in a magnetic field,” *Pisma v Zhurnal Eksperimentalnoi i Teoreticheskoi Fiziki*, vol. 46, pp. 176–179, 1987, Accessed: Dec. 05, 2024. [Online]. Available: <https://ui.adsabs.harvard.edu/abs/1987PZETF..46..176K/abstract>

[6]

V. V. Kveder, T. R. McHedlidze, Y. A. Osip’yan, and A. I. Shalynin, “Characteristics of microwave losses in a superconducting ceramic subjected to a magnetic field,” *ZhETF Pisma Redaktsiiu*, vol. 46, p. S176, 1987, Accessed: Dec. 05, 2024. [Online]. Available: <https://ui.adsabs.harvard.edu/abs/1987ZhPmR..46S.176K/abstract>

[7]

V. V. Kveder, T. R. Mchedlidze, Y. A. Osip'yan, and A. I. Shalynin, "Combined electron resonance in a one-dimensional dislocation band," *Zh. Eksp. Teor. Fiz.*, vol. 93, pp. 1470–1479, 1987, Accessed: Dec. 05, 2024. [Online]. Available: http://www.jetp.ras.ru/cgi-bin/dn/e_066_04_0838.pdf

[8]

V. V. Kveder, T. R. Mchedlidze, Yu. A. Ossipyan, and A. I. Shalynin, "Specific Features of Microwave Absorption of Superconducting Ceramics in a Magnetic Field," in *Novel Superconductivity*, S. A. Wolf and V. Z. Kresin, Eds., Boston, MA: Springer US, 1987, pp. 897–900. doi: [10.1007/978-1-4613-1937-5_111](https://doi.org/10.1007/978-1-4613-1937-5_111).

[9]

V. Liebbich *et al.*, "Analytical performance of the emal-2 mass-spectrometer with laser ion-source," *Journal of analytical chemistry of the USSR*, vol. 42, no. 10, pp. 1408–1419, 1987, Accessed: Dec. 05, 2024. [Online]. Available: <https://scholar.google.com/scholar?cluster=1394771847143942021&hl=en&oi=scholarr>

[10]

V. V. Kveder, A. E. Koshelev, T. R. Mchelidze, Y. A. Osipyan, and A. I. Shalynin, "Temperature dependence of conduction by reconstructed dislocations in silicon and nonlinear effects," *Soviet Physics-JETP*, vol. 68, no. 1, pp. 104–108, 1989, Accessed: Dec. 05, 2024. [Online]. Available: <https://elibrary.ru/item.asp?id=36785319>

[11]

V. V. Kveder, T. Mchedlidze, Y. A. Ossipyan, and A. I. Shalynin, "I. Conductivity Along Dislocations: Temperature Dependence and Nonlinear Effects II. Combined Resonance and Structure Peculiarities of Plastically Deformed Silicon," *Solid State Phenomena*, vol. 6, pp. 301–308, 1989, Accessed: Dec. 05, 2024. [Online]. Available: <https://www.scientific.net/SSP.6-7.301.pdf>

[12]

V. V. Kveder, T. R. Mchedlidze, I. A. Osip'ian, and A. I. Shalynin, "Relationship between a combined resonance in plastically deformed n-type silicon with a dislocation structure," *Soviet physics. Solid state*, vol. 32, no. 8, pp. 1292–1295, 1990, Accessed: Dec. 05, 2024. [Online]. Available: <https://pascal-francis.inist.fr/vibad/index.php?action=getRecordDetail&idt=19575001>

[13]

V. V. Kveder, T. R. Mchedlidze, Yu. A. Osipyan, and A. I. Shalynin, "Investigation of one-dimensional defects in Si using the EDSR," in *Defect Control in Semiconductors*, Elsevier, 1990, pp. 1417–1422. doi: [10.1016/B978-0-444-88429-9.50074-4](https://doi.org/10.1016/B978-0-444-88429-9.50074-4).

List of publications (1983-2024) by T. Mtchedlidze (Mchedlidze)

[14]

V. V. Kveder, T. R. Mchedlidze, Y. A. Osip'yan, and A. I. Shalynin, "Relation of combined resonance in plastically deformed n-Si with dislocation structure," *Fizika Tverdogo Tela*, vol. 32, no. 8, pp. 2224–2229, 1990, Accessed: Dec. 05, 2024. [Online]. Available: <https://www.mathnet.ru/eng/ftt6281>

[15]

M. Wattenbach, C. Kisielowski-Kemmerich, H. Alexander, V. V. Kveder, T. R. McHedlidze, and Yu. A. Osipyan, "Electric-Dipole Spin Resonance of Dislocations in Plastically Deformed p-Type Silicon," *physica status solidi (b)*, vol. 158, no. 1, pp. K49–K53, 1990, doi: [10.1002/pssb.2221580150](https://doi.org/10.1002/pssb.2221580150).

[16]

V. V. Kveder and T. R. Mchedlidze, "Anisotropy and temperature dependence of electric-dipole resonances at dislocations in p-Si," *Zh. Eksp. Teor. Fiz.*, vol. 102, p. 186, 1992, Accessed: Dec. 05, 2024. [Online]. Available: http://jetp.ras.ru/cgi-bin/dn/e_075_01_0092.pdf

[17]

T. R. Mchedlidze, V. V. Kveder, J. Jablonski, and K. Sumino, "Electric-dipole spin-resonance study on extended defects in Czochralski-grown silicon developed by thermal treatment," *Physical Review B*, vol. 50, no. 3, pp. 1511–1518, 1994, doi: [10.1103/PhysRevB.50.1511](https://doi.org/10.1103/PhysRevB.50.1511).

[18]

S. A. Shevchenko, Yu. A. Ossipyan, T. R. McHedlidze, E. A. Steinman, and R. A. Batto, "Defect states in Si containing dislocation nets," *physica status solidi (a)*, vol. 146, no. 2, pp. 745–755, 1994, doi: [10.1002/pssa.2211460219](https://doi.org/10.1002/pssa.2211460219).

[19]

J. Jablonski, B. Shen, T. R. Mchedlidze, M. Imai, and K. Sumino, "Oxygen precipitation in CZ silicon crystals contaminated with iron," *Materials Science Forum*, vol. 196–201, no. pt 4, pp. 1859–1864, 1995, doi: [10.4028/www.scientific.net/msf.196-201.1859](https://doi.org/10.4028/www.scientific.net/msf.196-201.1859).

[20]

T. R. Mchedlidze, I. Yonenaga, A. Matsui, and K. Sumino, "Electrical transport in SixGe_{1-x} bulk alloys," *Materials Science Forum*, vol. 196–201, no. pt 1, pp. 353–358, 1995.

[21]

T. R. Mchedlidze, I. Yonenaga, and K. Sumino, "Subsurface damage in single diamond tool machined Si wafers," *Materials Science Forum*, vol. 196–201, no. pt 4, pp. 1841–1846, 1995, doi: [10.4028/www.scientific.net/msf.196-201.1841](https://doi.org/10.4028/www.scientific.net/msf.196-201.1841).

[22]

J. Jablonski *et al.*, “Effect of oxidizing ambient on the buried oxide synthesis in low-dose SIMOX wafers,” in *Proceedings of the Seventh International Symposium on Silicon-on-Insulator Technology and Devices*, The Electrochemical Society, 1996, p. 47. Accessed: Dec. 05, 2024. [Online]. Available: https://books.google.com/books?hl=en&lr=&id=GO19mfbfbkQC&oi=fnd&pg=PA47&dq=info:AmS5_8MOKiwJ:scholar.google.com&ots=6rHx7ACKY5&sig=mKhP3UbwNAB0P8sL_ZUzz2NvOdM

[23]

T. R. Mchedlidze and I. Yonenaga, “Hall effect in anisotropic SixGe_{1-x} polycrystals,” *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers*, vol. 35, no. 2 PART A, pp. 652–655, 1996, doi: [10.1143/jjap.35.652](https://doi.org/10.1143/jjap.35.652).

[24]

M. Nishimura, S. Yoshino, H. Motoura, S. Shimura, T. Mchedlidze, and T. Hikone, “The direct observation of grown-in laser scattering tomography defects in czochralski silicon,” *Journal of the Electrochemical Society*, vol. 143, no. 10, pp. L243–L246, 1996, doi: [10.1149/1.1837159](https://doi.org/10.1149/1.1837159).

[25]

V. Markevich, T. McHedlidze, and M. Suezawa, “Silicon incorporation in a shallow donor center in hydrogenated Czochralski-grown Si crystals: An EPR study,” *Physical Review B - Condensed Matter and Materials Physics*, vol. 56, no. 20, pp. R12695–R12697, 1997, doi: [10.1103/PhysRevB.56.R12695](https://doi.org/10.1103/PhysRevB.56.R12695).

[26]

T. Mchedlidze and I. Yonenaga, “Hall effect measurements on SixGe_{1-x} bulk alloys,” presented at the Materials Research Society Symposium - Proceedings, 1997, pp. 381–384.

[27]

V. P. Markevich, T. Mchedlidze, M. Suezawa, and L. I. Murin, “EPR study of hydrogen-related radiation-induced shallow donors in silicon,” *Physica Status Solidi (B) Basic Research*, vol. 210, no. 2, pp. 545–549, 1998, doi: [10.1002/\(SICI\)1521-3951\(199812\)210:2<545::AID-PSSB545>3.0.CO;2-L](https://doi.org/10.1002/(SICI)1521-3951(199812)210:2<545::AID-PSSB545>3.0.CO;2-L).

[28]

T. Mchedlidze and K. Matsumoto, “Electrically detected magnetic resonance signal from iron contaminated Czochralski silicon crystal,” *Journal of Applied Physics*, vol. 83, no. 8, pp. 4042–4048, 1998, doi: [10.1063/1.367160](https://doi.org/10.1063/1.367160).

[29]

T. Mchedlidze, K. Matsumoto, and E. Asano, “Electrical activity of defects induced by oxygen precipitation in Czochralski-grown silicon wafers,” *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers*, vol. 38, no. 6 A, pp. 3426–3432, 1999, doi: [10.1143/jjap.38.3426](https://doi.org/10.1143/jjap.38.3426).

[30]

T. Mchedlidze, K. Matsumoto, T.-C. Lin, and M. Suezawa, “Dependence of electrically detected magnetic resonance signal shape from iron-contaminated silicon wafers on the thermal treatment of the samples,” *Physica B: Condensed Matter*, vol. 273–274, pp. 404–407, 1999, doi: [10.1016/S0921-4526\(99\)00491-3](https://doi.org/10.1016/S0921-4526(99)00491-3).

[31]

H. Uchiyama, K. Matsumoto, T. Mchedlidze, M. Nisimura, and K. Yamabe, “N+P junction leakage current caused by oxygen precipitation defects and its temperature dependence,” *Journal of the Electrochemical Society*, vol. 146, no. 6, pp. 2322–2327, 1999, doi: [10.1149/1.1391934](https://doi.org/10.1149/1.1391934).

[32]

B. Langhanki *et al.*, “Magnetic resonance studies of shallow donor centers in hydrogenated Cz-Si crystals,” *Physica B: Condensed Matter*, vol. 302–303, pp. 212–219, 2001, doi: [10.1016/S0921-4526\(01\)00431-8](https://doi.org/10.1016/S0921-4526(01)00431-8).

[33]

T. Mchedlidze, N. Fukata, and M. Suezawa, “Incorporation of oxygen or di-hydrogen in silicon monovacancy: Spin-resonance study of defect excited state,” *Physica B: Condensed Matter*, vol. 308–310, pp. 321–324, 2001, doi: [10.1016/S0921-4526\(01\)00888-2](https://doi.org/10.1016/S0921-4526(01)00888-2).

[34]

T. Mchedlidze, N. Fukata, and M. Suezawa, “Modeling the subsurface region of Cz-Si wafers with properly fabricated bulk FZ-Si samples,” *Physica B: Condensed Matter*, vol. 308–310, pp. 474–476, 2001, doi: [10.1016/S0921-4526\(01\)00745-1](https://doi.org/10.1016/S0921-4526(01)00745-1).

[35]

T. Mchedlidze and M. Suezawa, “New electron spin resonance spectra from iron-vacancy pair in silicon: I. Defect with two values for the spin,” *Physica B: Condensed Matter*, vol. 308–310, pp. 421–423, 2001, doi: [10.1016/S0921-4526\(01\)00769-4](https://doi.org/10.1016/S0921-4526(01)00769-4).

[36]

T. Mchedlidze and M. Suezawa, “New electron spin resonance spectra from iron-vacancy pair in silicon: II. Hyperfine interactions and isotopic effect,” *Physica B: Condensed Matter*, vol. 308–310, pp. 400–403, 2001, doi: [10.1016/S0921-4526\(01\)00760-8](https://doi.org/10.1016/S0921-4526(01)00760-8).

[37]

N. Fukata, T. McHedlidze, M. Suezawa, K. Saito, and A. Kasuya, “Complexes of platinum and hydrogen in silicon observed by optical absorption and electron spin resonance,” *Physical Review B - Condensed Matter and Materials Physics*, vol. 66, no. 23, pp. 1–11, 2002, doi: [10.1103/PhysRevB.66.235209](https://doi.org/10.1103/PhysRevB.66.235209).

[38]

N. Fukata, T. Mchedlidze, M. Suezawa, K. Saito, and A. Kasuya, “Platinum–hydrogen complexes in silicon observed by measurements of optical absorption and electron spin resonance,” *Applied Physics Letters*, vol. 81, no. 1, pp. 40–42, Jul. 2002, doi: [10.1063/1.1491008](https://doi.org/10.1063/1.1491008).

[39]

T. Mchedlidze, “Gate-oxide integrity evaluation using non-ideal metal-oxide-silicon capacitor structures,” *Solid State Phenomena*, vol. 82–84, pp. 735–740, 2002.

[40]

T. Mchedlidze, N. Fukata, and M. Suezawa, “ESR spectra from platinum-hydrogen pair in silicon,” *Japanese Journal of Applied Physics, Part 2: Letters*, vol. 41, no. 6 A, pp. L609–L611, 2002, doi: [10.1143/jjap.41.1609](https://doi.org/10.1143/jjap.41.1609).

[41]

T. Mchedlidze, N. Fukata, and M. Suezawa, “Properties of platinum-hydrogen complexes in silicon: An ESR study,” *Japanese Journal of Applied Physics, Part 2: Letters*, vol. 41, no. 9 A/B, pp. L967–L969, 2002, doi: [10.1143/jjap.41.1967](https://doi.org/10.1143/jjap.41.1967).

[42]

T. Mchedlidze, K. Matsumoto, and M. Suezawa, “Iron Gettering in Czochralski Silicon: Can Spin-Dependent Recombination Give New Information?,” 2002, Accessed: Dec. 05, 2024. [Online]. Available: https://www.researchgate.net/profile/Teimuraz-Mchedlidze-2/publication/268521075_Iron_Gettering_in_Czochralski_Silicon_Can_Spin-Dependent_Recombination_Give_New_Information/links/546f5db80cf2d67fc0310f89/Iron-Gettering-in-Czochralski-Silicon-Can-Spin-Dependent-Recombination-Give-New-Information.pdf

[43]

T. Mchedlidze and M. Suezawa, “Author’s comment on ‘new electron spin resonance spectra from iron-vacancy pair in silicon: I. Defect with two values for the spin; II - Hyperfine interactions and isotopic effect,’” *Physica B: Condensed Matter*, vol. 324, no. 1–4, pp. 188–190, 2002, doi: [10.1016/S0921-4526\(02\)01296-6](https://doi.org/10.1016/S0921-4526(02)01296-6).

[44]

T. Mchedlidze and M. Suezawa, “Properties of an iron-vacancy pair in silicon,” *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers*, vol. 41, no. 12, pp. 7288–7292, 2002, doi: [10.1143/jjap.41.7288](https://doi.org/10.1143/jjap.41.7288).

[45]

T. Mchedlidze and M. Suezawa, “Iron-vacancy pair in silicon: an ESR study,” in *Forum on the Science and Technology of Silicon Materials 2003*, Tokyo: JATIS, 2002, pp. 200–220. Accessed: Dec. 05, 2024. [Online]. Available: https://www.researchgate.net/profile/Teimuraz-Mchedlidze-2/publication/268685585_Iron-vacancy_pair_in_silicon_an_ESR_study/links/54734ed50cf2d67fc0362332/Iron-vacancy-pair-in-silicon-an-ESR-study.pdf

[46]

M. Suezawa, N. Fukata, T. Mchedlidze, and A. Kasuya, “Many optical absorption peaks observed in electron-irradiated n-type Si,” *Journal of Applied Physics*, vol. 92, no. 11, pp. 6561–6566, 2002, doi: [10.1063/1.1519343](https://doi.org/10.1063/1.1519343).

[47]

P. Kaminski, R. Kozlowski, A. Jelenski, T. Mchedlidze, and M. Suezawa, “High-resolution photoinduced transient spectroscopy of electrically active iron-related defects in electron irradiated high-resistivity silicon,” *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers*, vol. 42, no. 9 A, pp. 5415–5419, 2003, doi: [10.1143/jjap.42.5415](https://doi.org/10.1143/jjap.42.5415).

[48]

T. Mchedlidze, N. Fukata, and M. Suezawa, “Correlation between ESR and infrared absorption signals from platinum-hydrogen complexes in silicon,” *Physica B: Condensed Matter*, vol. 340–342, pp. 650–653, 2003, doi: [10.1016/j.physb.2003.10.006](https://doi.org/10.1016/j.physb.2003.10.006).

[49]

T. Mchedlidze and M. Suezawa, “Electron spin resonance signal from a tetra-interstitial defect in silicon,” *Journal of Physics Condensed Matter*, vol. 15, no. 22, pp. 3683–3688, 2003, doi: [10.1088/0953-8984/15/22/303](https://doi.org/10.1088/0953-8984/15/22/303).

[50]

T. Mcchedlidze and M. Suezawa, “Features of isotopic shift in the fine structure term of ESR spectra from iron-vacancy pair in silicon,” *Physica B: Condensed Matter*, vol. 340–342, pp. 556–560, 2003, doi: [10.1016/j.physb.2003.09.136](https://doi.org/10.1016/j.physb.2003.09.136).

[51]

T. Mcchedlidze and M. Suezawa, “Properties of tetra-interstitial agglomerate in silicon: An ESR study,” *Physica B: Condensed Matter*, vol. 340–342, pp. 682–686, 2003, doi: [10.1016/j.physb.2003.09.165](https://doi.org/10.1016/j.physb.2003.09.165).

[52]

T. Mcchedlidze, I. Yonenaga, and M. Suezawa, “ESR signature of tetra-interstitial defect in silicon,” *Materials Science in Semiconductor Processing*, vol. 6, no. 5–6, pp. 263–266, 2003, doi: [10.1016/j.mssp.2003.07.015](https://doi.org/10.1016/j.mssp.2003.07.015).

[53]

T. Mcchedlidze and M. Suesawa, “Properties and formation mechanism of tetrainterstitial agglomerates in hydrogen-doped silicon,” *Physical Review B - Condensed Matter and Materials Physics*, vol. 70, no. 20, pp. 205203-1–205203–9, 2004, doi: [10.1103/PhysRevB.70.205203](https://doi.org/10.1103/PhysRevB.70.205203).

[54]

T. Mcchedlidze and M. Suezawa, “An iron-phosphorus pair in silicon,” *Journal of Physics Condensed Matter*, vol. 16, no. 8, pp. L79–L84, 2004, doi: [10.1088/0953-8984/16/8/L02](https://doi.org/10.1088/0953-8984/16/8/L02).

[55]

T. Mcchedlidze and M. Suezawa, “Influence of Hydrogen on the Formation of Interstitial Agglomerates in Silicon,” *Solid State Phenomena*, vol. 95–96, pp. 129–134, 2004.

[56]

M. Izadifard *et al.*, “Band alignment in GaInNPGaAs heterostructures grown by gas-source molecular-beam epitaxy,” *Applied Physics Letters*, vol. 86, no. 26, p. 261904, 2005, doi: [10.1063/1.1952586](https://doi.org/10.1063/1.1952586).

[57]

T. Mcchedlidze, “Formation and properties of iron-phosphorus and iron-phosphorus-hydrogen complexes in silicon,” *Solid State Phenomena*, vol. 108–109, pp. 379–384, 2005, doi: [10.4028/3-908451-13-2.379](https://doi.org/10.4028/3-908451-13-2.379).

[58]

T. Mchedlidze, S. Binetti, A. Le Donne, S. Pizzini, and M. Suezawa, “Electric-dipole spin-resonance signals related to extended interstitial agglomerates in silicon,” *Journal of Applied Physics*, vol. 98, no. 4, 2005, doi: [10.1063/1.2001750](https://doi.org/10.1063/1.2001750).

[59]

T. Mchedlidze, S. Binetti, A. Le Donne, M. Suezawa, and S. Pizzini, “Rod-like defects in CZ-Si investigated by spin resonance and photoluminescence spectroscopies,” presented at the *Physica Status Solidi C: Conferences*, 2005, pp. 1807–1811. doi: [10.1002/pssc.200460509](https://doi.org/10.1002/pssc.200460509).

[60]

I. P. Vorona *et al.*, “Magnetic resonance signatures of grown-in defects in GaInNP alloys grown on a GaAs substrate,” *Applied Physics Letters*, vol. 86, no. 22, p. 222110, May 2005, doi: [10.1063/1.1943487](https://doi.org/10.1063/1.1943487).

[61]

T. Arguirov *et al.*, “Residual stress in Si nanocrystals embedded in a SiO₂ matrix,” *Applied Physics Letters*, vol. 89, no. 5, p. 053111, Jul. 2006, doi: [10.1063/1.2260825](https://doi.org/10.1063/1.2260825).

[62]

D. Dagnelund *et al.*, “Effect of nitrogen ion bombardment on defect formation and luminescence efficiency of GaNP epilayers grown by molecular-beam epitaxy,” *Applied Physics Letters*, vol. 88, no. 10, p. 101904, Mar. 2006, doi: [10.1063/1.2182028](https://doi.org/10.1063/1.2182028).

[63]

M. Kittler *et al.*, “Regular dislocation networks in silicon as a tool for novel device application,” presented at the *ECS Transactions*, 2006, pp. 429–450. doi: [10.1149/1.2355777](https://doi.org/10.1149/1.2355777).

[64]

M. Kittler *et al.*, “1.5 μ-m emission from a silicon MOS-LED based on a dislocation network,” presented at the *Technical Digest - International Electron Devices Meeting, IEDM*, 2006. doi: [10.1109/IEDM.2006.346912](https://doi.org/10.1109/IEDM.2006.346912).

[65]

T. Mchedlidze and M. Kittler, “Involvement of iron-phosphorus complexes in iron gettering for n-type silicon,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 203, no. 4, pp. 786–791, 2006, doi: [10.1002/pssa.200564512](https://doi.org/10.1002/pssa.200564512).

[66]

M. Reiche *et al.*, “Dislocation-induced light emission,” presented at the ECS Transactions, 2006, pp. 311–319. doi: [10.1149/1.2357081](https://doi.org/10.1149/1.2357081).

[67]

I. P. Vorona, T. Mchedlidze, D. Dagnelund, I. A. Buyanova, W. M. Chen, and K. Köhler, “Optically detected magnetic resonance studies of point defects in Ga(Al)NAs,” *Physical Review B - Condensed Matter and Materials Physics*, vol. 73, no. 12, 2006, doi: [10.1103/PhysRevB.73.125204](https://doi.org/10.1103/PhysRevB.73.125204).

[68]

I. P. Vorona *et al.*, “Signatures of grown-in defects in GaInNP alloys grown on a GaAs substrate from magnetic resonance studies,” *Physica B: Condensed Matter*, vol. 376–377, no. 1, pp. 571–574, 2006, doi: [10.1016/j.physb.2005.12.144](https://doi.org/10.1016/j.physb.2005.12.144).

[69]

T. Arguirov *et al.*, “Effect of laser annealing on crystallinity of the Si layers in Si/SiO₂ multiple quantum wells,” *Applied Surface Science*, vol. 254, no. 4, pp. 1083–1086, Dec. 2007, doi: [10.1016/j.apsusc.2007.07.150](https://doi.org/10.1016/j.apsusc.2007.07.150).

[70]

T. Hoang *et al.*, “Influence of dislocation loops on the near-infrared light emission from silicon diodes,” *IEEE Transactions on Electron Devices*, vol. 54, no. 8, pp. 1860–1866, 2007, doi: [10.1109/TED.2007.901072](https://doi.org/10.1109/TED.2007.901072).

[71]

M. Kittler *et al.*, “Silicon nanostructures for IR light emitters,” *Materials Science and Engineering C*, vol. 27, no. 5-8 SPEC. ISS., pp. 1252–1259, 2007, doi: [10.1016/j.msec.2006.09.034](https://doi.org/10.1016/j.msec.2006.09.034).

[72]

M. Kittler *et al.*, “Regular dislocation networks in silicon as a tool for nanostructure devices used in optics, biology, and electronics,” *Small*, vol. 3, no. 6, pp. 964–973, 2007, doi: [10.1002/smll.200600539](https://doi.org/10.1002/smll.200600539).

[73]

T. Mchedlidze, T. Arguirov, G. Jia, and M. Kittler, “Signatures of distinct structures related to rod-like defects in silicon detected by various measurement methods,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 204, no. 7, pp. 2229–2237, 2007, doi: [10.1002/pssa.200675447](https://doi.org/10.1002/pssa.200675447).

[74]

T. Mchedlidze, T. Arguirov, M. Kittler, T. Hoang, J. Holleman, and J. Schmitz, "Influence of electric field on spectral positions of dislocation-related luminescence peaks in silicon: Stark effect," *Applied Physics Letters*, vol. 91, no. 20, p. 201113, Nov. 2007, doi: [10.1063/1.2813024](https://doi.org/10.1063/1.2813024).

[75]

T. Mchedlidze *et al.*, "Structural and optical properties of Si/SiO₂ multi-quantum wells," *Physica E: Low-Dimensional Systems and Nanostructures*, vol. 38, no. 1–2, pp. 152–155, 2007, doi: [10.1016/j.physe.2006.12.022](https://doi.org/10.1016/j.physe.2006.12.022).

[76]

I. P. Vorona, T. Mchedlidze, D. Dagnelund, I. A. Buyanova, W. M. Chen, and K. Köhler, "Identification of point defects in Ga(Al)NAs alloys," presented at the AIP Conference Proceedings, 2007, pp. 227–228. doi: [10.1063/1.2729851](https://doi.org/10.1063/1.2729851).

[77]

X. Yu *et al.*, "Combined CL/EBIC/DLTS investigation of a regular dislocation network formed by Si wafer direct bonding," *Semiconductors*, vol. 41, no. 4, pp. 458–461, 2007, doi: [10.1134/S1063782607040197](https://doi.org/10.1134/S1063782607040197).

[78]

H. Habenicht, P. Gundel, T. Mchedlidze, M. Kittler, G. Coletti, and W. Warta, "Defect transformation in intentionally contaminated FZ silicon during low temperature annealing," in *Proceedings of the 23rd European Photovoltaic Solar Energy Conference, Valencia, Spain*, 2008, pp. 1933–1937. Accessed: Dec. 05, 2024. [Online]. Available: <https://scholar.google.com/scholar?cluster=6424273032630592202&hl=en&oi=scholarr>

[79]

M. Kittler *et al.*, "Dislocation engineering for a Si-based light emitter at 1.5 μm," 2008, Accessed: Dec. 05, 2024. [Online]. Available: <https://www.riam.kyushu-u.ac.jp/rese/nano/hawaii2008/pdf/D-05.pdf>

[80]

M. Kittler *et al.*, "Dislocations in silicon as a tool to be used in optics, electronics and biology," *Solid State Phenomena*, vol. 131–133, pp. 289–292, 2008.

[81]

M. Kittler *et al.*, “Stark effect at dislocations in silicon for modulation of a 1.5- μ m light emitter,” in *Silicon Photonics III*, SPIE, 2008, pp. 139–145. Accessed: Dec. 05, 2024. [Online]. Available: <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/6898/1/Stark-effect-at-dislocations-in-silicon-for-modulation-of-a/10.1117/12.773295.short>

[82]

T. Mchedlidze *et al.*, “Engineering of dislocation-loops for light emission from silicon diodes,” *Solid State Phenomena*, vol. 131–133, pp. 303–308, 2008.

[83]

T. Mchedlidze *et al.*, “Influence of a substrate, structure and annealing procedures on crystalline and optical properties of Si/SiO₂ multiple quantum wells,” *Thin Solid Films*, vol. 516, no. 20, pp. 6800–6803, 2008, doi: [10.1016/j.tsf.2007.12.083](https://doi.org/10.1016/j.tsf.2007.12.083).

[84]

T. Mchedlidze *et al.*, “Light-induced solid-to-solid phase transformation in Si nanolayers of Si-SiO₂ multiple quantum wells,” *Physical Review B - Condensed Matter and Materials Physics*, vol. 77, no. 16, 2008, doi: [10.1103/PhysRevB.77.161304](https://doi.org/10.1103/PhysRevB.77.161304).

[85]

T. Mchedlidze *et al.*, “Regular dislocation networks in Si. Part II: Luminescence,” *Solid State Phenomena*, vol. 131–133, pp. 503–510, 2008.

[86]

T. Wilhelm, T. Mchedlidze, X. Yu, T. Arguirov, M. Kittler, and M. Reiche, “Regular dislocation networks in silicon part I: Structure,” *Solid State Phenomena*, vol. 131–133, pp. 571–578, 2008.

[87]

T. Arguirov *et al.*, “Silicon based light emitters utilizing radiation from dislocations; electric field induced shift of the dislocation-related luminescence,” *Physica E: Low-Dimensional Systems and Nanostructures*, vol. 41, no. 6, pp. 907–911, 2009, doi: [10.1016/j.physe.2008.08.045](https://doi.org/10.1016/j.physe.2008.08.045).

[88]

T. Arguirov *et al.*, “Laser annealing of the Si layers in Si/SiO₂ multiple quantum wells,” *Materials Science and Engineering: B*, vol. 159–160, no. C, pp. 57–60, 2009, doi: [10.1016/j.mseb.2009.01.035](https://doi.org/10.1016/j.mseb.2009.01.035).

[89]

G. Jia *et al.*, “EBIC/PL investigations of dislocation network produced by silicon wafer direct bonding,” *Superlattices and Microstructures*, vol. 45, no. 4–5, pp. 314–320, 2009, doi: [10.1016/j.spmi.2008.12.012](https://doi.org/10.1016/j.spmi.2008.12.012).

[90]

M. Kittler, T. Mchedlidze, T. Arguirov, W. Seifert, M. Reiche, and T. Wilhelm, “Silicon based IR light emitters,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 6, no. 3, pp. 707–715, 2009, doi: [10.1002/pssc.200880713](https://doi.org/10.1002/pssc.200880713).

[91]

T. McHedlidze, T. Arguirov, M. Holla, and M. Kittler, “Electroluminescence from p-i-n structure fabricated using crystalline silicon on glass technology,” *Journal of Applied Physics*, vol. 105, no. 9, 2009, doi: [10.1063/1.3124358](https://doi.org/10.1063/1.3124358).

[92]

T. Mchedlidze, T. Wilhelm, T. Arguirov, M. Trushin, M. Reiche, and M. Kittler, “Correlation of electrical and luminescence properties of a dislocation network with its microscopic structure,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 6, no. 8, pp. 1817–1822, 2009, doi: [10.1002/pssc.200881462](https://doi.org/10.1002/pssc.200881462).

[93]

M. Trushin, O. Vyvenko, T. Mchedlidze, O. Kononchuk, and M. Kittler, “Electronic states of oxygen-free dislocation networks produced by direct bonding of silicon wafers,” *Solid State Phenomena*, vol. 156–158, pp. 283–288, 2009, doi: [10.4028/www.scientific.net/SSP.156-158.283](https://doi.org/10.4028/www.scientific.net/SSP.156-158.283).

[94]

T. Arguirov, T. Mchedlidze, M. Reiche, and M. Kittler, “Optimization of the luminescence properties of silicon diodes produced by implantation and annealing,” *Solid State Phenomena*, vol. 156–158, pp. 579–584, 2010, doi: [10.4028/www.scientific.net/SSP.156-158.579](https://doi.org/10.4028/www.scientific.net/SSP.156-158.579).

[95]

M. Kittler, T. Arguirov, R. Schmid, W. Seifert, and T. Mchedlidze, “Photoluminescence and EBIC for process control and failure analysis in Si-based photovoltaics,” presented at the Conference Proceedings from the International Symposium for Testing and Failure Analysis, 2010, pp. 137–142.

[96]

T. Mchedlidze, T. Arguirov, S. Kouteva-Arguirova, and M. Kittler, “Characterization of thin film photovoltaic material using photoluminescence and Raman spectroscopy,” *Solid State Phenomena*, vol. 156–158, pp. 419–424, 2010, doi: [10.4028/www.scientific.net/SSP.156-158.419](https://doi.org/10.4028/www.scientific.net/SSP.156-158.419).

[97]

T. McHedlidze, T. Arguirov, S. Kouteva-Arguirova, and M. Kittler, “Light induced solid-phase crystallization of Si nanolayers in Si/SiO₂ multiple quantum wells,” *Journal of Applied Physics*, vol. 107, no. 12, 2010, doi: [10.1063/1.3446831](https://doi.org/10.1063/1.3446831).

[98]

T. Mchedlidze, O. Kononchuk, T. Arguirov, M. Trushin, M. Reiche, and M. Kittler, “Determination of the origin of dislocation related luminescence from silicon using regular dislocation networks,” *Solid State Phenomena*, vol. 156–158, pp. 567–572, 2010, doi: [10.4028/www.scientific.net/SSP.156-158.567](https://doi.org/10.4028/www.scientific.net/SSP.156-158.567).

[99]

M. Reiche, M. Kittler, A. Haehnel, T. Arguirov, and T. Mchedlidze, “Properties of interfacial dislocations in hydrophobic bonded Si-wafers,” presented at the ECS Transactions, 2010, pp. 441–449. doi: [10.1149/1.3483534](https://doi.org/10.1149/1.3483534).

[100]

T. Arguirov, C. Wenger, M. Lukosius, T. Mchedlidze, M. Reiche, and M. Kittler, “Silicon based light emitter utilizing tunnel injection of excess carriers via MIS structure,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 8, no. 4, pp. 1302–1306, 2011, doi: [10.1002/pssc.201083992](https://doi.org/10.1002/pssc.201083992).

[101]

A. Klossek, T. Arguirov, T. Mchedlidze, and M. Kittler, “Anomalous temperature behaviour of band to band electroluminescence in silicon solar cells,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 8, no. 3, pp. 911–914, 2011, doi: [10.1002/pssc.201000206](https://doi.org/10.1002/pssc.201000206).

[102]

T. McHedlidze, T. Arguirov, and M. Kittler, “Fast light-induced solid phase crystallization of nanometer thick silicon layers on quartz,” *Solid State Phenomena*, vol. 178–179, pp. 110–115, 2011, doi: [10.4028/www.scientific.net/SSP.178-179.110](https://doi.org/10.4028/www.scientific.net/SSP.178-179.110).

[103]

T. Mchedlidze, T. Arguirov, O. Kononchuk, M. Trushin, and M. Kittler, “Structures responsible for radiative and non-radiative recombination activity of dislocations in silicon,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 8, no. 3, pp. 991–995, 2011, doi: [10.1002/pssc.201000367](https://doi.org/10.1002/pssc.201000367).

[104]

T. McHedlidze *et al.*, “Structural characterization of crystallized Si thin film material by HRTEM and Raman spectroscopy,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 208, no. 3, pp. 588–591, 2011, doi: [10.1002/pssa.201000156](https://doi.org/10.1002/pssa.201000156).

[105]

T. Mchedlidze, J. Schneider, T. Arguirov, and M. Kittler, “Characterization of crystalline silicon on glass using photoluminescence,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 8, no. 4, pp. 1334–1338, 2011, doi: [10.1002/pssc.201084019](https://doi.org/10.1002/pssc.201084019).

[106]

T. McHedlidze, J.-H. Zollondz, and M. Kittler, “Characterization of traps in crystalline silicon on glass film using deep-level transient spectroscopy,” *Solid State Phenomena*, vol. 178–179, pp. 100–105, 2011, doi: [10.4028/www.scientific.net/SSP.178-179.100](https://doi.org/10.4028/www.scientific.net/SSP.178-179.100).

[107]

M. Ratzke, T. Mchedlidze, T. Arguirov, N. Acharya, M. Kittler, and J. Reif, “Scanning probe studies of amorphous silicon subjected to laser annealing,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 8, no. 4, pp. 1351–1355, 2011, doi: [10.1002/pssc.201084021](https://doi.org/10.1002/pssc.201084021).

[108]

M. Schade, H. S. Leipner, T. Mchedlidze, and M. Kittler, “TEM study on light induced crystallization of amorphous silicon,” *Verhandlungen der Deutschen Physikalischen Gesellschaft*, 2011, Accessed: Dec. 05, 2024. [Online]. Available: <https://www.osti.gov/etdeweb/biblio/21471767>

[109]

R. P. Schmid, D. Mankovics, T. Arguirov, T. Mchedlidze, and M. Kittler, “Novel imaging techniques for dislocation-related D1-photo-luminescence of multicrystalline Si wafers - two different approaches,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 8, no. 4, pp. 1297–1301, 2011, doi: [10.1002/pssc.201084023](https://doi.org/10.1002/pssc.201084023).

[110]

R. P. Schmid, D. Mankovics, T. Arguirov, M. Ratzke, T. McHedlidze, and M. Kittler, “Rapid dislocation-related D1-photoluminescence imaging of multicrystalline Si wafers at room temperature,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 208, no. 4, pp. 888–892, 2011, doi: [10.1002/pssa.201026269](https://doi.org/10.1002/pssa.201026269).

[111]

M. Trushin, O. Vyvenko, T. Mchedlidze, M. Reiche, and M. Kittler, “Electrical characterization of silicon wafer bonding interfaces by means of voltage dependent light beam and electron beam induced current and capacitance of Schottky diodes,” *Physica Status Solidi (C) Current Topics in Solid State Physics*, vol. 8, no. 4, pp. 1371–1376, 2011, doi: [10.1002/pssc.201084029](https://doi.org/10.1002/pssc.201084029).

[112]

T. Mchedlidze and M. Kittler, “Investigation of defect states in heavily dislocated thin silicon films,” *Journal of Applied Physics*, vol. 111, no. 5, p. 053706, Mar. 2012, doi: [10.1063/1.3692745](https://doi.org/10.1063/1.3692745).

[113]

T. McHedlidze *et al.*, “Capability of photoluminescence for characterization of multi-crystalline silicon,” *Journal of Applied Physics*, vol. 111, no. 7, 2012, doi: [10.1063/1.3699275](https://doi.org/10.1063/1.3699275).

[114]

D. Kot, T. Mchedlidze, G. Kissinger, and W. Von Ammon, “Characterization of Deep Levels Introduced by RTA and by Subsequent Anneals in n-Type Silicon,” *ECS J. Solid State Sci. Technol.*, vol. 2, no. 1, pp. P9–P12, 2013, doi: [10.1149/2.013301jss](https://doi.org/10.1149/2.013301jss).

[115]

D. Kot, T. Mchedlidze, G. Kissinger, and W. Von Ammon, “Characterization of deep levels introduced by RTA and by subsequent anneals in n-type silicon,” presented at the ECS Transactions, 2013, pp. 269–277. doi: [10.1149/05005.0269ecst](https://doi.org/10.1149/05005.0269ecst).

[116]

K. Lauer *et al.*, “Impact of a p-type solar cell process on the electrical quality of Czochralski silicon,” presented at the Energy Procedia, 2013, pp. 589–596. doi: [10.1016/j.egypro.2013.07.321](https://doi.org/10.1016/j.egypro.2013.07.321).

[117]

K. Lauer *et al.*, “Impact of a p-type Solar Cell Process on the Electrical Quality of Czochralski Silicon,” *Energy Procedia*, vol. 38, pp. 589–596, 2013, doi: [10.1016/j.egypro.2013.07.321](https://doi.org/10.1016/j.egypro.2013.07.321).

[118]

T. Mchedlidze *et al.*, “Local detection of deep carrier traps in the pn-junction of silicon solar cells,” *Applied Physics Letters*, vol. 103, no. 1, p. 013901, Jul. 2013, doi: [10.1063/1.4807142](https://doi.org/10.1063/1.4807142).

[119]

T. Mchedlidze, C. Möller, K. Lauer, and J. Weber, “Evolution of iron-containing defects during processing of Si solar cells,” *Journal of Applied Physics*, vol. 116, no. 24, p. 245701, 2014, doi: [10.1063/1.4905027](https://doi.org/10.1063/1.4905027).

[120]

T. McHedlidze, M. Nacke, E. Hieckmann, and J. Weber, “On the capability of deep level transient spectroscopy for characterizing multi-crystalline silicon,” *Journal of Applied Physics*, vol. 115, no. 1, 2014, doi: [10.1063/1.4837997](https://doi.org/10.1063/1.4837997).

[121]

T. Mchedlidze and J. Weber, “Iron-related carrier traps near the n+p-junctions of crystalline silicon solar cells: Impacts of feedstock and of the fabrication processes,” *Physica Status Solidi (B) Basic Research*, vol. 251, no. 8, pp. 1608–1613, 2014, doi: [10.1002/pssb.201451021](https://doi.org/10.1002/pssb.201451021).

[122]

T. Mchedlidze and J. Weber, “Radial distribution of iron in silicon crystals grown by Czochralski method from contaminated feedstock,” *Physica Status Solidi - Rapid Research Letters*, vol. 8, no. 3, pp. 228–230, 2014, doi: [10.1002/pssr.201308327](https://doi.org/10.1002/pssr.201308327).

[123]

M. Schade, T. Mchedlidze, M. Kittler, and H. S. Leipner, “Light induced crystallization of an amorphous silicon film embedded between silicon oxide layers,” *Physica Status Solidi (B) Basic Research*, vol. 251, no. 2, pp. 439–445, 2014, doi: [10.1002/pssb.201349143](https://doi.org/10.1002/pssb.201349143).

[124]

T. Mchedlidze and J. Weber, “Direct detection of carrier traps in Si solar cells after light-induced degradation,” *Physica Status Solidi - Rapid Research Letters*, vol. 9, no. 2, pp. 108–110, 2015, doi: [10.1002/pssr.201409474](https://doi.org/10.1002/pssr.201409474).

[125]

T. Mchedlidze, K. Krechan, B. Pötschick, and J. Weber, “Degradation of Si-solar cells during electroluminescence,” *Proceedings of the 28th ICDS, Espoo, Finland*, 2015, Accessed: Dec. 05, 2024. [Online]. Available: https://www.researchgate.net/profile/Teimuraz-Mchedlidze-2/publication/279878845_Degradation_of_Si-solar_cells_during_electroluminescence/links/559d06c708aeefefa1b832c5/Degradation-of-Si-solar-cells-during-electroluminescence.pdf

[126]

T. McHedlidze, M. Drescher, E. Erben, and J. Weber, “Capacitance transient spectroscopy measurements on high-k metal gate field effect transistors fabricated using 28nm technology node,” *Solid State Phenomena*, vol. 242, pp. 459–465, 2016, doi: [10.4028/www.scientific.net/SSP.242.459](https://doi.org/10.4028/www.scientific.net/SSP.242.459).

[127]

T. McHedlidze, A. Herguth, and J. Weber, “Monitoring of Si-solar cell degradation with electroluminescence,” *Solar Energy Materials and Solar Cells*, vol. 155, pp. 38–42, 2016, doi: [10.1016/j.solmat.2016.05.008](https://doi.org/10.1016/j.solmat.2016.05.008).

[128]

T. Mchedlidze and F. Herklotz, “Photoconductive detection of hydrogen in ZnO and rutile TiO₂,” *Journal of Applied Physics*, vol. 120, no. 5, p. 055703, 2016, Accessed: Dec. 05, 2024. [Online]. Available: <https://www.osti.gov/biblio/22597744>

[129]

M. Drescher *et al.*, “Reliability characterization in high-k metal gate technology,” presented at the MikroSystemTechnik Kongress 2017 “MEMS, Mikroelektronik, Systeme”, Proceedings, 2017, pp. 488–491.

[130]

M. Drescher *et al.*, “Charakterisierung der Zuverlässigkeit in der High-k Metal Gate Technologie,” 2017, Accessed: Dec. 05, 2024. [Online]. Available: <https://publica.fraunhofer.de/entities/publication/0536914e-9707-4cd5-ad9e-188e0667c75a/details>

[131]

E. V. Lavrov, I. Chaplygin, and T. Mchedlidze, “Photoconductivity as a method to probe defects in ultra thin Si films,” *Applied Physics Letters*, vol. 110, no. 13, p. 132102, Mar. 2017, doi: [10.1063/1.4979276](https://doi.org/10.1063/1.4979276).

[132]

T. Mchedlidze, M. Drescher, E. Erben, and J. Weber, “Interface traps in 28 nm node field effect transistors detected by capacitance transient spectroscopy,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 214, no. 7, p. 201700182, 2017, doi: [10.1002/pssa.201700182](https://doi.org/10.1002/pssa.201700182).

[133]

T. Mchedlidze, J. Weber, N. V. Abrosimov, and H. Riemann, “Deep carrier traps in as grown isotopically pure 28Si FZ crystal,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 214, no. 7, p. 1700238, 2017, doi: [10.1002/pssa.201700238](https://doi.org/10.1002/pssa.201700238).

[134]

T. Mtchedlidze, “Gettering and Defect Engineering in Semiconductor Technology (GADEST 2017),” *Physica Status Solidi (A) Applications and Materials Science*, vol. 214, no. 7, p. 201770139, 2017, doi: [10.1002/pssa.201770139](https://doi.org/10.1002/pssa.201770139).

[135]

T. Mchedlidze, M. M. Alam, A. Herguth, and J. Weber, “In Situ Observation of the Degradation in Multi-Crystalline Si Solar Cells by Electroluminescence,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 216, no. 17, p. 1800918, 2019, doi: [10.1002/pssa.201800918](https://doi.org/10.1002/pssa.201800918).

[136]

T. Mchedlidze and J. Weber, “Location and Properties of Carrier Traps in mc-Si Solar Cells Subjected to Degradation at Elevated Temperatures,” *Physica Status Solidi (a)*, vol. 216, no. 17, p. 1900142, Sep. 2019, doi: [10.1002/pssa.201900142](https://doi.org/10.1002/pssa.201900142).

[137]

T. Mchedlidze and E. Erben, “Characterization of Ultrathin Fully Depleted Silicon-on-Insulator Devices Using Subthreshold Slope Method,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 217, no. 24, p. 2020000625, 2020, doi: [10.1002/pssa.202000625](https://doi.org/10.1002/pssa.202000625).

[138]

T. Mchedlidze, A. Schmid, and J. Heitmann, “Characterization of Ultrathin FDSOI Stacks Using Low-Field Mobility,” *Physica Status Solidi (A) Applications and Materials Science*, vol. 219, no. 17, p. 202200133, 2022, doi: [10.1002/pssa.202200133](https://doi.org/10.1002/pssa.202200133).

[139]

T. Mchedlidze, “How to avoid distortions of trap probing due to instrumental recovery time during Deep-Level Transient Spectroscopy measurements,” 2023, doi: [10.13140/RG.2.2.24131.78884](https://doi.org/10.13140/RG.2.2.24131.78884).

[140]

J. Heitmann, F. Beyer, D. Hiller, T. Mchedlidze, and M. Müller, “Gettering and Defect Engineering in Semiconductor Technology (GADEST 2024),” *Physica Status Solidi (a)*, vol. 221, no. 17, p. 2400631, Sep. 2024, doi: [10.1002/pssa.202400631](https://doi.org/10.1002/pssa.202400631).

[141]

T. Mchedlidze, “Pros for using MFIA in DLTS studies,” 2024, doi: [10.13140/RG.2.2.13161.51044](https://doi.org/10.13140/RG.2.2.13161.51044).

[142]

T. Mchedlidze, K. Klose, A. Weber, E. Drubetskoi, M. Müller, and J. Heitmann, “On-stage solar cell degradation process: DLTS and LT-PL-EL study,” 2024, doi: 10.13140/RG.2.2.17962.02243.