

Curriculum Vitae

PERSONAL INFORMATION
SURNAME: ROGDAKIS
NAME: KONSTANTINOS
DATE OF BIRTH: 18/12/1982
PLACE OF RESIDENCE: HERAKLION
MARITAL STATUS: MARRIED, 2 CHILDREN
E-MAIL: krogdakis@hmu.gr
TEL.: +302810-379775 / +306974650279

CURRENT ACADEMIC POSITION
Assistant Professor in Nanoelectronics, Electrical and Computer Engineering department of the Hellenic Mediterranean University (HMU)

MAIN RESEARCH INTERESTS

- SiC and Si nanowire field effect transistors
- Perovskite oxide nanoelectronics
- Emerging printed electronics (sensors, transistors, memristors)
- Single spin quantum-bits
- Superconductive spintronics
- Photovoltaic devices enabled by 2d materials

EDUCATION

10.2006 - 10.2009	Ph.D in Nanoelectronics /Grenoble Institute of Technology (GIT), France in co-supervision with University of Crete (UoC), Greece PhD thesis manuscript
09.2005 - 09.2006	Master in Microsystems & Nanodevices - National Technical University of Athens (NTUA), Greece / GPA 8.78/10 (<u>ranked 1st among 25</u>)
09.2000 - 09.2005	Diploma (BSc+MSc) in Applied Mathematics and Physics (10 semesters study) – NTUA, Greece; GPA 7.70/10 (ranking at the top 7% of his class)

RESEARCH EXPERIENCE

01.2021-present	Researcher (Grade C) Team Leader of emerging Printed Electronics at i-EMERGE Institute of Hellenic Mediterranean University Research Center (HMU-RC), Greece
07.2018-01.2021	Research Scientist Interface engineering in Perovskite Solar Cells and Modules, Nanomaterials for Emerging Devices, Hellenic Mediterranean University (HMU), Greece
03.2017 - 06.2018	Research Associate Superconductive spintronics London Centre for Nanotechnology – Univ. College of London (UCL), UK
07.2016 – 02.2017	Research Associate European Proposal writing/submission on tunnel FETs Microelectronics Research Group - FORTH, Greece
07.2013 – 06.2015	Research Associate Single spin quantum-bits in GaAs heterostructures Neel Institute, CNRS, Grenoble, France
01.2010 – 06.2013	Post-doctoral research Associate Perovskites oxide nanoelectronics

EDUCATION

- 10.2006 - 10.2009** Ph.D in Nanoelectronics /Grenoble Institute of Technology (GIT), France in co-supervision with University of Crete (UoC), Greece
[PhD thesis manuscript](#)
- 09.2005 - 09.2006** Master in Microsystems & Nanodevices - National Technical University of Athens (NTUA), Greece / GPA 8.78/10 (ranked 1st among 25)
- 09.2000 - 09.2005** Diploma (BSc+MSc) in Applied Mathematics and Physics (10 semesters study) – NTUA, Greece; GPA 7.70/10 (ranking at the top 7% of his class)
Electron Complexity Laboratory - FORTH, Greece
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RESEARCH VISITING

- 3/2008 Visit in Prof. S. K. Lee group, Nano Sensor and Device Lab (NSDL), Jeonju, S. Korea
- 5/2010 Visit in Prof. S. K. Lee group, NSDL, Jeonju, S. Korea
- 4/2011 Visit in Dr K. Kiefer group, Helmholtz Zentrum Berlin, Germany
- 10/2017 Visit in ISIS center, Oxford, UK
- 06/2022 Visit in UNINOVA university, Lisbon, Portugal
- 10/2022 Visit in ICN2 research center, Barcelona, Spain
- 03/2023 Visit in Graphene research Center, Cambridge, UK
- 03/2023 Visit in Imperial College of London, London, UK
- 02/2024 Visit in INAM UJI lab, Castellon, Spain
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EUROPEAN/NATIONAL PROPOSAL SUBMISSION

Extended experience in European/National proposal submission including setting up and managing various consortia as coordinating team and full proposal writing / submission. His list includes more than 25 proposal submissions, participating in 10 successful grant allocations with a total HMU budget >4.6Mie for the period 2020-2027. Dr Rogdakis served as the scientific admin of Work Package 11 - Core 3 phase of Graphene Flagship (GF) on energy conversion for the period 2018-2023.

As examples of his experience on proposal writing and securing funding, he was the main writer of the funded European Project entitled 'Emerging Printed Electronics Infrastructure' (092021-09/2025) with a total budget of 6.2 million euro, serving as the leader of the technical liaison office of EMERGE. Dr K. Rogdakis was the co-writer of the newly funded research infrastructure on sustainable semiconductors, INFRACHIP with a total budget of 15mie (~1.3mie for HMU), while participating in a third research infrastructure on renewable energy generation, Risenergy (HMU participates as a subcontractor of Tyndall). Professor K. Rogdakis was selected as the deputy leader of the interface office of INFRACHIP, as well as a member of the evaluation panel of users' proposals submission in Risenergy. He was also the main writer of the EU funded project *HOLISTIC* with a HMU budget of 430ke within the Hop on activity of the EIC Pathfinder call (hop on in *Solarup project*).

REVIEWER IN INTERNATIONAL SCIENTIFIC JOURNALS

He has acted as a reviewer for the following journals:

- Nature Electronics, Chemistry Society Reviews, Advanced Functional Materials, Nanoenergy (Elsevier), ACS Advanced Electronic Materials, The Journal of Physical Chemistry Letters (ACS), IEEE Trans. Elec. Devices / Nanotechnology / Electron Dev. Letters, Journal of Physics D (IOP), Nanotechnology (IOP), Physica B & E, Microelectronics Engineering, Applied Surface Science & Applied Physics A, Journal of Material Chemistry A&C, Materials Advances, Nanoscale (ACS), Nanomaterials (MDPI), Buildings, Micromachines, Optoelectronics (MDPI), BMC Materials.
 - Reviewer Editor in Frontiers: Condensed matter and Photonics.
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MANUSCRIPTS IN SUBMISSION

PUBLICATIONS IN PEER-REVIEWED JOURNALS

- 39 Masaud Almalki, et al., **2024** Improving the operational stability of perovskite solar cells with cesium-doped graphene oxide interlayer *Journal of Energy Chemistry* <https://doi.org/10.1016/j.jechem.2024.04.037>
- 38 G. Psaltakis, K. Rogdakis, et al., **2024** Dataset of Perovskite Memristive Current-Voltage Characteristics for Pattern Recognition, *IEEE Journal on Flexible Electronics*, DOI: 10.1109/JFLEX.2024.3390671
- 37 Michalis Loizos, Konstantinos Rogdakis*, et al., **2024** Resistive switching memories with enhanced durability enabled by mixed-dimensional perfluoroarene perovskite heterostructures *Nanoscale Horizons* DOI: 10.1039/D4NH00104D
- 36 D. Tsikritzis et al, **2024** Engineering of perovskite/electron-transporting layer interface with transition metal chalcogenides for improving the performance of inverted perovskite solar cells *Sustainable Energy Fuels*, 8, 2180-2190
- 35 N Vidakis et al., **2024** Optimization course of hexagonal boron carbide ceramic nanofiller content in polypropylene for material extrusion additive manufacturing: Engineering response, nanostructure, and rheology insights. *Next Nanotechnology* 5, 100054
- 34 G. Psaltakis, K. Rogdakis, M. Loizos and E. Kymakis, **2024** One-vs-One, One-vs-Rest, and a novel Outcome-Driven One-vs-One binary classifiers enabled by optoelectronic memristors towards overcoming hardware limitations in multiclass classification, *Discover Materials* 4, 7 (Nature Springer).
- 33 K. Rogdakis, George Psaltakis, Giorgos Fagas, Aidan Quinn, Rodrigo Martins and Emmanuel Kymakis **2024** Hybrid Chips to Enable a Sustainable Internet of Things Technology: Opportunities and Challenges, *Discover Materials* 4 (1), 4 (Nature Springer)
- 32 Konstantinos Rogdakis and Emmanuel Kymakis **2023** Interface engineering toward efficient carbon-based perovskite solar cells, *Device*, 1 (5)
- 31 M. Tountas et al., **2023** Improved Performance of Hole-Transporting Material-Free Perovskite Solar Cells Using a Low-Temperature Printed Carbon Paste, *ACS Applied Electronic Materials*, 5, 11, 6228–6235
- 30 K. Rogdakis, K. Chatzimanolis, G. Psaltakis, N. Tzoganakis, T. D. Anthopoulos and E. Kymakis **2023** Mixed-Halide Perovskite Memristors with Gate-Tunable Functions Operating at Low-Switching Electric Fields, *Advanced Electronic Materials*, 2300424
- 29 D. Jovanović, et al., **2023** Long term stability of graphene/c-Si Schottky-junction solar cells, *Solar Energy Materials & Solar Cells* 258 (2023) 112414
- 28 C. Polyzoidis et al., **2023**, Piezo-phototronic In₂Se₃ nanosheets as a material platform for printable electronics towards multi-functional sensing applications, *Advanced Materials Technologies* 8, 2300203 (on the cover of the journal)
- 27 M. Loizos, M. Tountas, P. Mangelis, K. Rogdakis, E. Kymakis, **2023** Surface Passivation of sequentially-deposited perovskite solar cells by octylammonium spacer cations, *APL Energy* 1, 026102 (2023) DOI: 10.1063/5.0144330 (Citations=1)
- 26 K. Anagnostou et al., **2022**, Geometric Tuning for Enhanced Moisture-Driven Electricity Generation Enabled by Graphene-Oxide Flakes, *Coatings* 12 (12), 1970.
- 25 M. Loizos, K. Rogdakis and E. Kymakis, **2022**, An electronic synaptic memory device based on four-cation mixed halide perovskite, *Discover Materials (Nature Springer)* 2, Article number: 11 (2022) (Citations=3)
- 24 D. Tsikritzis et al., **2022** Two-dimensional BiTeI as a novel perovskite additive for printable perovskite solar cells, *Sustainable Energy Fuels*, 6, 5345-5359 (Citations=4)
- 23 V. Thiney, P.-A. Mortemousque, K. Rogdakis et al. **2022** In-flight detection of few electrons using a singlet-triplet spin qubit, *Phys. Rev. Research* 4, 043116
- 22 K. Rogdakis et al., **2022** Memristive perovskite solar cells towards parallel solar energy harvesting and processing-in-memory computing, *Mater. Adv.*, **2022**, 3, 7002-7014 (on journal's cover) (Citations=7)
- 21 S. Pescetelli et al. **2022** Integration of two-dimensional materials-based perovskite solar panels into a stand-alone solar farm, *Nature Energy* 7, p. 597–607 (2022) (Citations=75) (journal cover)

- 20 K. Zekentes, E. Choi, E. Bano and K. Rogdakis **2022** Progress in SiC nanowire field-effect-transistors for integrated circuits and sensing applications, *Microelectronic Engineering*, 255, 111704 (Citations=18)
- 19 C. Polyzoidis, K. Rogdakis and E. Kymakis, **2021** Indoor perovskite photovoltaics for the Internet of Things – challenges and opportunities towards market uptake, *Adv. Energy Materials*, DOI: 10.1002/aenm.202101854 (Citations=56)
- 18 N. Zhao et al. **2021** Growth, strain and spin orbit torques in epitaxial NiMnSb films sputtered on GaAs, *Phys. Rev. Materials* 5, 014413. (Citations=4)
- 17 K. Rogdakis, N. Karakostas and E. Kymakis **2021** Up-scalable emerging energy conversion technologies enabled by 2D materials: from miniature power harvesters towards grid-connected energy systems, *Energy & Environmental Science*, 14, 3352 (Citations=28)
- 16 K. Chatzimanolis, K. Rogdakis et al. **2021**, Inverted perovskite solar cells with enhanced lifetime and thermal stability enabled by a metallic Tantalum Disulfide buffer layer, *Nanoscale Adv.*, 3, 3124. (Citations=22)
- 15 D. Tsikritzis, K. Rogdakis et al. **2020** A two-fold engineering approach based on Bi₂Te₃ flakes towards efficient and stable inverted perovskite solar cells, *Materials Advances*, 2020, 1, 450 – 462 (Citations=23)
- 14 M. Petrović, K Rogdakis, E Kymakis **2019** Beneficial impact of materials with reduced dimensionality on the stability of perovskite-based photovoltaics. *Journal of Physics: Energy* 1 (4), 044001 (Citations=6)
- 13 P. Phu et al. **2019** Bolometric ferromagnetic resonance techniques for characterising spin-Hall effect at high temperatures, *J. Magn. Magn. Mater.* 485, 304-307 (Citations=7)
- 12 K. Rogdakis et al. **2019** Spin diffusion length and spin Hall angle extraction of NbN thin films from spin pumping experiments, *Phys. Rev. Materials* 3, 014406 (Citations=39)
- 11 K. Rogdakis et al., **2017** Energy transfer in spin-pumping experiments *Appl. Phys. Express* 11 013004 (Citations=3)
- 10 K. Rogdakis et al. **2015** Geometric tuning of charge and spin correlations in manganite superlattices *Appl. Phys. Lett.* 106 023120 (Citations=2)
- 9 K. Rogdakis et al. **2012** Tunable ferroelectricity in artificial tri-layer superlattices comprised of non-ferroic components *Nature Communications* 3:1064, Doi:10.1038/ncomms2061 (Citations=58)
- 8 K. Zekentes and K. Rogdakis **2011** SiC nanowires: Material and devices *J. Phys. D: Appl. Phys.* 44 133001 Invited Topical Review (Citations=219)
- 7 K. Rogdakis, **2010** Experimental and theoretical study of 3C-silicon carbide nanowire field effect transistors, PhD dissertation, Grenoble INP (Citations=2)
- 6 K. Rogdakis et al. **2011** Rectifying source and drain contacts for effective carrier transport modulation of extremely doped SiC nanowire FETs *IEEE Trans. On Nanotechnology* 10 980-984 (Citations=20)
- 5 K. Rogdakis et al. **2009** Phonon and surface roughness limited mobility of gate-all-around 3C-SiC and Si nanowire FETs *Nanotechnology* 20 295202 (Citations=62)
- 4 S. K. Lee et al. **2009** Si Nanowire p-FET with asymmetric source-drain I-V characteristics *Solid State Communications* 149 461-463 (Citations=13)
- 3 S. Y. Lee et al. **2008** Fabrication of Ion-implanted Si Nanowire p-FETs *J. Phys. Chem. C* 112 13287–13291 (Citations=13)
- 2 K. Rogdakis et al. **2008** 3C-SiC nanowire FET: An experimental and theoretical Approach *Special Issue on SiC of IEEE Transactions on Electron Devices* 55 1970-1976 (Citations=57)
- 1 K. Rogdakis et al. **2007** Theoretical comparison of 3C-SiC and Si nanowire FETs in ballistic and diffusive regimes *Nanotechnology* 18 475715 (Citations=34)

Citations summary (Google Scholar): 891 (since 2019: 538), H-factor= 13

ORAL-POSTER PRESENTATIONS IN INTERNATIONAL CONFERENCES

Relevant work and obtained experimental results were presented in **>35 conferences** with **>20 oral** and **10 poster** contributions (full list of abstracts available upon request). Among the oral presentations, **>6 of them**

were invited talks. Recent invited talks in: a) Intensive Course in Layered Materials and Applications in ATHENA university on July 2022, b) 2DNanoMat - 2D Nanomaterials for Energy and Environmental Applications on October 2022 in Barcelona, c) Graphene CDT Advanced Technology Lectures in Cambridge Graphene Center on March 2023 and d) in nanoBalkan2023 International Conference in Tirana on October 2023. Adding to these, he has delivered an **invited seminar** in FORTH in October of 2009 presenting the main results obtained during his PhD. All the following talks/poster presentations have been given by K. Rogdakis (apart from no 12-16 and 18).

1. K. Rogdakis delivered an **invited oral presentation** in IEEE HMU workshop on May 2024 in Heraklion, Greece, with a title "Perovskites meet 2D materials: A novel materials platform for efficient energy harvesting and neuromorphics"
2. K. Rogdakis delivered an **invited oral presentation** in WOCSDICE-EXMATEC 2024 conference on May 2024 in Heraklion, Greece, with a title "Perovskites meet 2D materials: A novel materials platform for efficient energy harvesting and neuromorphics"
3. K. Rogdakis delivered an **invited oral presentation** in HOPV 2024 conference on May 2024 in Valencia, Spain, with a title "Memristive perovskite solar cells for self-powered IoT edge computing"
4. K. Rogdakis delivered an **oral presentation** in Neuronics conference 2024 on February 2024 in Valencia, Spain, with a title "Parallel volatile and non-volatile memristive switching in mixed-halide perovskite synaptic transistors"
5. K. Rogdakis delivered an **oral presentation** in Memrysis 2023 on November 2023 in Torino, Italy, with a title "3D/2D Heterostructure mixed halide perovskite resistance memories enabled by perfluorinated spacer cations with enhanced retention and endurance characteristics"
6. K. Rogdakis delivered an **invited talk** in nanoBalkan2023 International Conference in Tirana on October 2023 with a title "Perovskites meet 2D materials: A novel materials platform for efficient energy harvesting and neuromorphics".
7. K. Rogdakis delivered an **invited talk** in Graphene CDT Advanced Technology Lectures in Cambridge Graphene Center on March 2023 with a title "Perovskites meet 2D materials: A novel materials platform for efficient energy harvesting and neuromorphics".
8. K. Rogdakis delivered an oral presentation in Innolae conference 2023 organized in Cambridge, UK with a title: *Memristive perovskite solar cells towards parallel solar energy harvesting and processing-in-memory computing.*
9. K. Rogdakis delivered an **invited talk** in 2DNanoMat - 2D Nanomaterials for Energy and Environmental Applications in October 2022 in Barcelona with a title: *Up-scalable conventional and emerging energy conversion technologies enabled by 2D materials: from miniature power harvesters towards grid-connected energy systems.*
10. K. Rogdakis delivered an oral presentation in TCM conference 2022 in Heraklion October 2022 with a title: *Memristive perovskite solar cells towards parallel solar energy harvesting and processing-in-memory computing.*
11. K. Rogdakis delivered an oral presentation during 36th Pan-Hellenic conference on Solid-State Physics and Materials Science Heraklion, 26-28 September 2022, presenting results on the Integration of two-dimensional materials-based perovskite solar panels into a stand-alone solar farm- an event financially supported by Graphene Flagship.
12. K. Rogdakis delivered an oral presentation disseminating Emerging Printed Electronics Research Infrastructure- EMERGE during the 15th International Symposium on Flexible Organic Electronics (ISFOE22) held in Thessaloniki, Greece in 4-7th July 2022, an event financially supported by EMERGE.
13. K. Rogdakis delivered an oral presentation related to '*Memristive perovskite solar cells towards self-powered IoT edge computing*' during the 15th International Symposium on Flexible Organic Electronics (ISFOE22) held in Thessaloniki, Greece in 4-7th July 2022, a study financially supported by EMERGE.
14. Numerous meetings within Graphene Flagship, GF, presenting HMU deliverables for WP11- Core 2 and Core 3 phases during the period 6/2018-present. (i.e., recent annual GF meeting held in Dublin during 20-22/4 2022).
15. K. Rogdakis delivered a webinar on the School in Layered Materials and Applications organized by Athena university with a title of Up-scalable emerging energy conversion technologies enabled by 2D materials: from miniature power harvesters towards grid-connected energy systems.
16. Highly efficient and stable perovskite solar cells using Graphene-related-materials as dopants and interlayers, *NanoBio 2018 conference*, Heraklion, Greece September 2018; Invited talk
17. Spin pumping and spin transport in NbN/YIG structures, *IOP Magnetism 2018, Manchester, UK, 10-11 April 2018*; Oral presentation

18. Geometric tuning of charge and spin correlations in manganite superlattices, *E-MRS Spring Meeting, Lille, France, May 11-15 2015*; [Poster presentation](#)
19. Tunable ferroelectricity in tri-color superlattices composed of non-ferroic components, *ICAE2013, South Africa, July 1-4, 2013*; [Oral presentation](#)
20. Coupled ferromagnetism and ferroelectricity in superlattices of non-ferroelectric antiferromagnetic manganites, *Meeting of the American Physical Society 2013, Baltimore, USA*; [Oral presentation](#)
21. Magnetically tunable ferroelectricity in artificial tri-layer superlattices of non-ferroelectric manganites, *MMM-Intermag conference 2013, January 13-18, Chicago, USA*; [Oral presentation](#)
22. Emergent ferroelectricity and magnetoelectricity in asymmetric superlattices based on antiferromagnets, *E-MRS Fall Meeting, Warsaw, Poland, September 17-21 2012*; [Oral presentation](#)
23. Ferroelectricity and magnetoelectric coupling in superlattices composed of non-ferroic components, *Energy Materials Nanotechnology Meeting, Orlando Florida, April 16-20 2012*; [Invited talk](#)
24. Tunable ferroelectricity and magnetoelectricity at the interfaces of superlattices of antiferromagnets, *Meeting of the American Physical Society, Boston 27/2-2/3 2012*; [Invited talk](#)
25. Ferroelectricity and magnetoelectric coupling in superlattices composed of non-ferroic components, *The 4th APCTP workshop on multiferroics, Beijing 10-12/1/2012*; [Invited talk](#)
26. Material limitations for the development of high performance SiC NWFETs, *HeteroSiC 2011*; [Oral presentation](#)
27. SiC nanowire FET operation improvement by using Schottky contacts at source and drain regions, *WOCS-DICE 2011*, [Oral presentation](#)
28. Experimental and theoretical study of 3C-SiC nanowire field effect transistors, *IESL Seminar at FORTH Institute, 21/7/2009*
29. Field effect transistors based on catalyst-free grown 3C-SiC nanowires *International Conference of Silicon Carbide and Related Material, Germany 2009*; [Poster presentation](#)
30. Backscattering coefficient in 3C-SiC gate-all-around nanowire FETs *9th Nanotechnology conference IEEE NANO Genoa July 26-30 2009*; [Oral presentation](#)
31. Electrical transport properties of catalyst free grown 3C-SiC nanowires, *HeteroSiC/Workshop on Advanced Semiconductor Materials and devices for Power Electronics applications, Catania, Italy 2009*; [Oral presentation](#)
32. Electrical properties of 3C-SiC nanowires *17th European Heterostructure Technology Workshop HETECH, Venice, 2008*; [Oral presentation](#)
33. Effect of Source and Drain contacts Schottky Barrier on 3C- SiC nanowire FETs I-V characteristics *appeared in the European Conference of Silicon Carbide and Related Materials, Barcelona, Spain 2008*; [Poster presentation](#)
34. Theoretical comparison of 3C-SiC and Si nanowire FETs in ballistic regime *appeared in the International Conference of Silicon Carbide and Related Materials, Otsu, Japan 2007*; [Poster presentation](#)
35. *SiC nanowire FET Migas Summer School with subject: Multi-Physics and Multi-Scale Simulation for NanoElectronics, Grenoble, 2007*; [Poster presentation](#)

Participation in international committees for thesis evaluation

Assist. Professor K. Rogdakis participated in the evaluation of the research progress of Maria Elias Lopes Pereira of university UNINOVA, Portugal, with evaluation date 24/07/2023. The thesis subject was «Neuromorphic computation using memristor and thin film transistor devices based on amorphous oxide semiconductor technology». In the committee participated the following scientists:

Pedro Miguel Cândido Barquinha	Chair and co-supervisor, Associate Professor	NOVA University Lisbon
Konstantinos Rogdakis	External member, Principal Researcher	Hellenic Mediterranean University, Greece
Joana Maria Dória Vaz Pinto Morais Sarmiento	Internal member, Assistant Professor	NOVA University Lisbon

Asal Kiazadeh	Supervisor, Assistant Researcher	NOVA University Lisbon
Pydi Ganga Bahubalindrani	Co-supervisor, Assistant Professor	Indian Institute of Science Research and Education, Bhopal, India

Assist. Professor K. Rogdakis participated in the supervision and evaluation of the master thesis of Mr Manuel Vieira with thesis title «Flexible Triboelectric Nanogenerators of Metallic Mxenes» in the framework of the master program “MASTER IN MICRO AND NANOTECHNOLOGIES ENGINEERING” of university UNINOVA, Portugal, with evaluation date 20/11/2023. Mr Manuel Vieira during his thesis visited HMU and worked in NANO@HMU labs for two months where he fabricated and characterized corresponding samples.

OTHER ACCOMPLISHMENTS

- Foreign languages: English (fluent), German (intermediate), French (beginner)
- Programming languages: Turbo Pascal, Java, C, C++, LISP, Fortran
- TCAD-software: Synopsis (Medici/Suprem) and Silvaco (Atlas/Athena) simulation packages
- Other software: Mathematica, Matlab, Origin, Labview
- Material characterization tools: optical microscope, SEM, AFM, XRD, surface profilometer
- Trained in clean room processes (including e-beam lithography)
- RF-electronics
- Low temperature (20mK) electrical and magnetic characterization including C-V, I-V, Hall effect, pyroelectric-current, endurance and data retention of memory devices, RF measurements in HEMTs and QPCs, Coulomb diamond and stability diagram in quantum dots, ferromagnetic resonance, inverse spin Hall effect.
- Solar cells optoelectronic characterization (steady and transient J-V characteristics, transient photocurrent and photovoltage, external quantum efficiency, ISOS stability protocols, etc.)