

Lev Rovinsky CV

Materials Science and Engineering Student (PhD Candidate)

Residence: Tel Aviv, Israel

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Professional Summary

Data-driven R&D Process Engineer and Materials Scientist (PhD Candidate) with over 6 years of experience optimizing advanced manufacturing processes, designing custom laboratory/pilot tooling, and leading cross-functional technical workflows. Proven track record in translating complex material properties into scalable, high-yield engineering solutions using statistical analysis (DOE) and automation. Strong foundational background in automated lab control, microelectronics/semiconductor tool operation, and structured quality documentation.

Work Experience:

2024 – Present R&D Engineer, CENS Materials Ltd. Be'er Sheva, Israel

- Sole R&D engineer working directly with the VP R&D in a fast-paced industrial environment.
- Planned surface-treatment processes for cathode performance.
- Implemented validation criteria to ensure process effectiveness and control/prevent contamination.
- Built tools and workflows for data-driven research, technical analysis, and reporting.

2020 – 2026 Student Project Manager/Supervisor, Lachman Research Group

- Guided BSc and MSc engineering projects.
- Topics: CNT- and VACNT- related (synthesis, surface treatment and contamination, hybrids fabrications)
- Centered on technical problem solving, documentation, and timely completion of project milestones.

2019 – 2024 Tool Supervisor, TAU Center for Nanoscience and Nanotechnology.

- Operation, calibration, and first line troubleshooting of VST evaporators, PECVD, and ALD.
- Trained and qualified personnel for equipment operation, spanning safety, and procedures to maintain reliable contamination-free tool performance

2018 – 2024 Teaching Assistant, Materials Science Department, Tel Aviv University

- “Mathematics for Engineers” I & II and “Materials Characterization”.
- Prepared lectures, assignments, and exam sheets.

2017 – 2018 Research Assistant, Zack Research Group, Holon Institute of Technology

- Maintained laboratory logistics and supplies to support continuous experimental activity.
- Conducted morphological analysis of TMD nanomaterials and TMD-based nanocomposites using microscopy and related characterization tools.

Education:

2021 – Present – PhD (candidate), Materials Science and Engineering, Tel Aviv University

- Research focus: Carbon nanotube-based hybrid structures and composite materials, mainly CNT-based elastomer composites and VACNT-hybrids.
- Work spans CVD process development, nanoparticle decoration, and advanced characterization (mechanical, thermal, electrical) for engineered materials, linking processing parameters to material properties and performance, with structured documentation and reporting.
- Included and 3-month research stay at Northwestern University (2022) focusing on failure analysis of CNT-loaded rubber composite sensors, and relaxation simulations.

2017 – 2021 – MSc, Materials Science and Engineering, Tel Aviv University

- Thesis: Fabrication and characterization of alumina / vertically aligned carbon-nanotube nanocomposite materials.

- Developed and analyzed composite structures, combining processing, microstructure control, and property measurements relevant to functional materials.

2012 – 2016 – BSc, Advanced Materials Engineering, “Azrieli” College of Engineering, Jerusalem

- Specialization in semiconductors and microelectronics.
- Graduation project: SLA 3D printing of biocompatible smart nanocomposites, integrating polymer processing, materials selection, and characterization in an applied engineering context.

Technical Skills:

Automation and control: LabVIEW

Programming and data analysis: MATLAB (MathWorks certifications), Python (advanced entry-level).

Data processing and fitting: OriginPro, ImageJ, XPSPEAK41, KherveFitting, Fityk.

Design and simulation: CAD (Autodesk Inventor), DFM/DFA, FEA/CFD modeling (COMSOL, Ansys)

AI-assisted productivity: Proficient with LLM tools for technical planning, data interpretation, and coding support (Perplexity, Undermind, Gemini, Bolt, Claude, ChatGPT).

Project management: Ministry of Labor online course.

Academic Conferences/Achievements:

ICCM24 2025, Baltimore, MD, USA – Presented two lectures on composite and nanostructured materials.

MRS Fall Meetings 2019 & 2024, Boston, MA, USA – Poster and lecture presentations on advanced materials and interfaces.

IVS-IPSTA 2019, Haifa – Excellent poster award.

Israeli conferences and workshops (Nano IL 2021; ALI ALD Workshop, Technion; Interpore Israel; Rothschild Prize Symposium; IPPS Tel Aviv) – Posters and lectures on materials processing and characterization.

Tel Aviv University Engineering Faculty Academic Excellence Merit (2020)

Publications:

1. **“Alumina Thin-Film Deposition on Rough Topographies Comprising Vertically Aligned Carbon Nanotubes: Implications for Membranes, Sensors, and Electrodes”**, ACS Applied Nano Materials, 2021 – thin-film deposition and conformal coating on complex CNT structures.
2. **“Getting Under the Sensor’s Skin: The Importance of Electrical Contact Characterization for Conductive Composite Elastomers”**, Advanced Electronic Materials, 2025 – electrical contact and composite-sensor characterization.
3. **“It is Not the Catalyst: How Angle-of-Attack Engineering Overcomes Diffusion Limits in CNT Forest Growth”** – submitted; CNT forest growth process-engineering.
4. **“Low-Temperature Ar Annealing to Homogenize Vertically Aligned CNT Nanocomposites”** – in revision; low-temperature annealing and homogenization of CNT composites

Volunteer experience:

- 2024–2025 – TAU Clean-tech Club – Participant in “energy net-zero” initiatives.
- 2022 – TAU Alpha Club – Guided gifted high-school students in science and engineering topics.
- 2021 – IVS 2021 Student Conference – Organizing committee member.
- 2016–2021 – Private tutor in chemistry, physics, and mathematics, focusing on diagnosing misunderstandings and building problem-solving skills.

Military service:

- 2011–2012 – Commander of technical crew, AH-1 Cobra helicopter maintenance – Led a team handling multiple parallel technical processes, training and mentoring soldiers, and ensuring timely execution of maintenance tasks.
- 2009–2011 – Helicopter engine shop mechanic, AH-1 Cobra – Learned fault trees quickly, performed routine and emergency maintenance procedures, and supported safe operation under time-critical conditions.

Languages:

- Hebrew – native.
- English and Russian – excellent.
- Spanish – A2 level.