

Lynda Amichi  
Postdoctoral Research Associate  
Center for Nanophase Materials Sciences, Oak Ridge National Laboratory  
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## Education

- 2018 Grenoble Alpes University, CEA-Grenoble, Ph.D., Physics.
- 2015 Sorbonne University, M.S., Applied Physics major in Materials Science.
- 2013 Denis Diderot University, B.S., Physics.

## Professional Experience

- 2023 - Present Postdoctoral Research Associate, Center for Nanophase Materials Sciences, ORNL, Oak Ridge, TN (USA).
- 2020 - 2022 Science Diplomat, Office for Science and Technology, Embassy of France, Houston, TX (USA).
- 2015 - 2018 French commission of nuclear and alternative energies (CEA), Grenoble (France).
- Jan.-Jul 2015 Master's 2 Research Internship, Mineralogy, Materials Science and Cosmo-Chemistry Institute (IMPMC), Paris (France), and Earth Life Science Institute (ELSI), Tokyo (Japan).
- Apr.-Jul. 2014 Master's 1 Research internship, Materials and Quantum Phenomena Laboratory (MPQ), Paris (France).

## Research Expertise

- Transmission Electron Microscopy (TEM):
  - Electron tomography, 3D reconstruction, and visualization.
  - High-Resolution on Aberration-Corrected Scanning TEM imaging (*ac*-HRSTEM).
  - Off-axis electron holography using a single biprism for electrical field mapping.
  - *In-situ* heating experiments.
  - Energy Dispersive X-Ray Spectroscopy (EDX).

Instruments: JEOL Neoarm, Thermofisher: Krios, Titan Themis, and Titan Ultimate.

- Laser-Assisted Atom Probe Tomography (LA-APT): CAMECA FlexTap.
- Focused Ion Beam and Scanning Electron Microscopy (FIB and SEM): Thermofisher DualBeam Strata 400s and Helios 500.
- Raman Spectroscopy.
- *In-situ* X-Ray absorption of the near edge structure (XANES) and extended fine structure (EXAFS) at high-pressure at synchrotron (ESRF, Grenoble).
- Analysis of the III-V semiconductors and beam sensitive materials: fuel cell and electrolyzer catalysts for hydrogen energy applications.
- Study of geological materials under extreme high-temperature and high-pressure conditions in a diamond anvil cell.

## Selected Peer-Reviewed Publications

1. Hu, L., Wrubel, J. A., Baez-Cotto, C. M., Intia, F., Park, J. H., Kropf, A. J., Kariuki, N., Huang, Z., Farghaly, A., **Amichi, L.**,... Neyerlin, K. C. (2023). A scalable membrane electrode assembly architecture for efficient electrochemical conversion of CO<sub>2</sub> to formic acid. *Nature Communications*, 14(1), 7605.
2. **Amichi, L.**, Mouton, I., Enrico, D. R., Boureau, V., Barbier, F., Dussaigne, A., Cooper, D. (2020). Three-dimensional measurement of mg dopant distribution and electrical activity in gan by correlative atom probe tomography and off-axis electron holography. *Journal of Applied Physics*, 127(6).
3. **Amichi, L.**, Mouton, I., Boureau, V., Di Russo, E., Vennegues, P., De Mierry, P., . . . Cooper, D. (2019). Correlative investigation of mg doping in gan layers grown at different temperatures by atom probe tomography and off-axis electron holography. *Nanotechnology*, 31(4), 045702. aggregation of mg implanted in gan on si. (pp. 74–77). doi:10.1109/IIT.2018.8807939,
4. Siladie, A.-M., **Amichi, L.**, Mollard, N., Mouton, I., Bonef, B., Bougerol, C., Garro, N. et al. (2018). Dopant radial inhomogeneity in mg-doped gan nanowires. *Nanotechnology*, 29(25), 255706.

## Main Scientific Communications

- 2023 Oral presentation at the Microscopy and Microanalysis Conference 2023, Minneapolis, USA.
- 2018 Two oral presentations at the International Microscopy Conference, IMC 2018, Sydney, Australia.
- 2017 Oral presentation at the Microscopy of Semiconducting Materials, MSM XX, Oxford, UK.
- 2016 Poster presentation at the European Microscopy Congress, EMC 2016, Lyon, France.

## Professional Memberships

- Microscopy Society of America (MSA) - Microanalysis Society (MAS)

## Languages

- French, Mother language.
- English, Fluent.
- Spanish, Intermediate. Certification from the Pellissippi Community College, Knoxville, USA.

## References

- David Cullen, Senior R&D Scientist, ORNL. Postdoctoral advisor.  
Email: cullenda@ornl.gov.
- David Cooper, Senior Staff Scientist, CEA Grenoble. Ph.D. Supervisor.  
Email: david.cooper@cea.fr.
- Bettina Gardelles, Cultural Diplomat, Embassy of France. Co-worker.  
Email: bettina.gardelles@frenchculture.org.