

halofreeetch.eu



HaloFreeEtch

Novel approaches for halogen-free and sustainable etching of Silicon and Glass

Project

HaloFreeEtch aims to revolutionize semiconductor manufacturing by developing an environmentally sustainable etching process that eliminates the use of halogenated compounds.

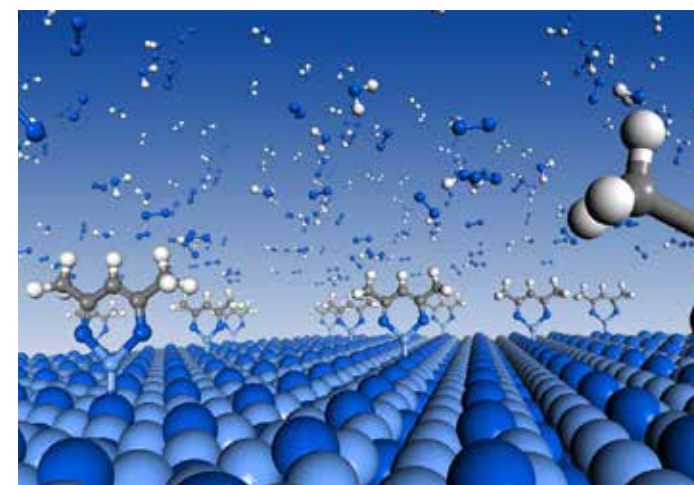
Funded by the European Union, this innovative initiative brings together leading experts from academia, research institutions, and industry to address the critical need for greener manufacturing technologies. By leveraging cutting-edge plasma etching techniques and advanced materials science, HaloFreeEtch strives to reduce the environmental footprint of semiconductor production while maintaining high performance and cost-effectiveness.

Case Studies



Development of a deep etching process for capacitive sensors without halogens

Reduce environmental impact and improve process efficiency.



Multi-Scale modeling for etching process optimization

Development of multi-scale models to predict and optimize energy efficiency and etching speed.

Objectives



Expected Impacts

HaloFreeEtch aims to significantly impact both the semiconductor industry and the environment by eliminating the use of harmful halogenated compounds in etching processes. This reduction in ecological footprint aligns with global efforts to combat climate change and promote sustainable practices.

The project will enhance the European semiconductor industry's competitiveness by developing cutting-edge, environmentally compliant technologies, essential as the EU enforces stricter regulations on fluorochemicals. This innovation will lower costs and improve compliance with environmental standards.

Partners



Project details

Project number: 101161153

Project name: Novel approaches for halogen-free and sustainable etching of Silicon and Glass

Project acronym: HaloFreeEtch

Topic: HORIZON-EIC-2023-PATHFINDERCHALLENGES-01-04

Type of action: HORIZON-EIC

Project starting date: 1 September 2024

Project duration: 48

EU Contribution: 3.997.735,00 Euro

Contacts

PROJECT COORDINATOR

Jörg Schuster | Chemnitz University of Technology
joerg.schuster@zfm.tu-chemnitz.de

DISSEMINATION MANAGER

Isella Vicini | Warrant Hub (Tinexta Group)
isella.vicini@warranthub.it



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HALOFREEETCH has received funding from the European Union under grant agreement n° 101161153