

UNIVERSITA' DEGLI STUDI DI GENOVA

AREA RICERCA, TRASFERIMENTO TECNOLOGICO E TERZA MISSIONE

SERVIZIO RICERCA

SETTORE RICERCA NAZIONALE

IL RETTORE

- Visto il Decreto Rettorale n. 3598 del 15/09/2025, con il quale è stato indetto il concorso per titoli e colloquio, per il conferimento di 1 borsa di ricerca post-lauream, di tipo starting, della durata di 6 mesi dell'importo lordo di € 8.118,00 (ottomilacentodiciotto/00), eventualmente rinnovabile, per lo svolgimento di una ricerca sul tema: "Studio di materiali elettrolitici a conduzione mista per celle ad ossidi solidi", presso il Dipartimento DICCA dell'Università degli Studi di Genova;
- Visto il Decreto Rettorale n. 4082 del 13/10/2025 con il quale è stata costituita la Commissione giudicatrice per il conferimento della suddetta borsa di ricerca;
- Visto il verbale della Commissione giudicatrice del concorso in parola, riunitasi in data 16/10/2025;
- Constatata la regolarità della procedura seguita;

DECRETA

Art. 1

Sono approvati gli atti del concorso di cui in premessa e la seguente graduatoria di merito:

1. Dott.ssa Ekaterina Skolotneva punti 86/100 .

Sotto condizione dell'accertamento dei requisiti di cui al bando, è dichiarata vincitrice del concorso in parola la Dott.ssa Ekaterina Skolotneva.

Genova,

IL RETTORE
(firmato digitalmente)

Ekaterina Skolotneva

Education

PHD CANDIDATE | CHEMICAL, MATERIALS AND PROCESS ENGINEERING | UNIVERSITY OF GENOA | 1 NOVEMBER 2022 – 31 OCTOBER 2025 | GENOA, ITALY

- Research Project «Development of a new photoelectrode material for the co-production of H₂ and H₂O₂ in wastewater treatment from organic pollutants: Synthesis, Characterization and Mathematical modelling»
- Supervisors: Prof. Marco Panizza, Prof. Davide Clematis
- Doctoral thesis defense is expected in May 2026

MASTER | CHEMISTRY | KUBAN STATE UNIVERSITY | 2020-2022 | KRASNODAR, RUSSIA

- GPA 5.0/5.0 (Degree with honours)
- Graduation Qualification Work «Mathematical modelling of the removal of organic pollutants from aqueous solutions by the anodic oxidation»

BACHELOR | TECHNOSPHERE SAFETY | KUBAN STATE UNIVERSITY | 2016-2020 | KRASNODAR, RUSSIA

- GPA 5.0/5.0 (Degree with honours)
- Graduation Qualification Work «Mathematical modeling of wastewater treatment system based on anodic oxidation process»

Professional Experience

PHD STUDENT IN CHEMICAL, MATERIALS AND PROCESS ENGINEERING | UNIVERSITY OF GENOA | 1 NOVEMBER 2022 – 31 OCTOBER 2025

- Research conceptualization, problem setting and goal definitions with a high level of independence
- Synthesis and modification of BiVO₄ photoelectrode (electrodeposition, SILAR, spin-coating, doping, co-catalyst application, defect engineering)
- Characterization of photoelectrode (voltammetry, electrochemical impedance spectroscopy, UV-vis spectroscopy, XRD analysis)
- Evaluation of photodegradation performance of photoelectrodes by organic degradation experiments (UV-vis spectroscopy, HPLC-DAD, COD)
- Mathematical modeling of theoretical limits for organic compounds photoelectrochemical oxidation

VISITING PHD STUDENT | UNIVERSITY OF WARSAW, LABORATORY OF ELECTROCHEMISTRY HEADED BY PROFESSOR MAGDALENA SKOMPSKA | JANUARY 2025 – AUGUST 2025

- Synthesis and performance evaluation of a wide range of photocatalysts
- Detection of pharmaceutical oxidation by-products by HPLC-DAD and HPLC-MS techniques
- HPLC-MS data analysis and revealing the pathway of pharmaceuticals oxidation
- Mechanistic studies of BiVO₄ photoelectrode performance towards organic compounds oxidation (scavenger experiments, probe molecule experiments)
- Co-supervision of Bachelor student's research mobility

RESEARCH ENGINEER | KUBAN STATE UNIVERSITY, RUSSIAN-FRENCH INTERNATIONAL ASSOCIATED LABORATORY «ION EXCHANGE MEMBRANES AND PROCESSES» HEADED BY PROFESSOR VICTOR NIKONENKO | MAY 2021 – AUGUST 2022

- Formulation of the model of ammonium chloride transport through an anion-exchange membrane to explain its unexpectedly high diffusion permeability for ammonium cations
- Formulation of the detailed convection-diffusion-reaction model of electrochemical oxidation of organic compounds taking into account two parallel electrochemical reactions to reveal the mechanism of paracetamol oxidation
- Conducting simulations and validating models using COMSOL Multiphysics software
- Administrative responsibilities: coordinating laboratory activities and documentation
- Co-supervision of a bachelor student's research course work

LABORATORY ASSISTANT | KUBAN STATE UNIVERSITY, RUSSIAN-FRENCH INTERNATIONAL ASSOCIATED LABORATORY «ION EXCHANGE MEMBRANES AND PROCESSES» HEADED BY PROFESSOR VICTOR NIKONENKO | SEPTEMBER 2019 – MAY 2021

- Formulation of 2D convection-diffusion model of paracetamol electrochemical oxidation process
- Formulation of the convection-diffusion-reaction model of bubble formation inside the pores of the reactive electrochemical membrane during the electrochemical oxidation of paracetamol
- Conducting simulations and validating models using COMSOL Multiphysics software

Involvement

- Grant of Russian Science Foundation “The use of anodic oxidation to neutralize organic pollutants of natural and waste waters” | project executor, 2019-2021
- Grant of Russian Science Foundation “Competitive ion transport in electro-baromembrane processes” | project executor, 2021-2022

Skills

LANGUAGE

- Russian (Native)
- English (Advanced)
- Italian (Elementary)

DIGITAL LITERACY

- Python (Numpy, Scipy, Matplotlib, Pandas)
- COMSOL Multiphysics
- NOVA, GPES, FRA
- X-Pert
- Microsoft Office/Mendeley/Origin

LABORATORY SKILLS

- Electrochemical measurements
- Synthesis techniques (electrodeposition, spin-coating, SILAR)
- UV-vis spectroscopy

Publications

Scopus Author ID: 57301486400, *h*-index 6

For more detailed information see the Publication record