

# Noemi Bellassai

Fixed-term research assistant

Dipartimento di Scienze Chimiche  
Università degli Studi di Catania, Catania (Italy)



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## Research Expertise and Interests

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Microfluidics, Biosensors, Optical Analytical Devices, Nanotechnology

## Education

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International Ph.D. in Chemical Sciences, Università degli Studi di Catania, 2018 Master Degree in Biomolecular Chemistry, Università degli Studi di Catania, 2014

## Professional experience / Research activities

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Fixed-term research assistant in Analytical Chemistry, 2022

Postdoctoral Researcher in Analytical Chemistry “PRIN 2017 “At the forefront of Analytical Chemistry: disruptive detection technologies to improve food safety – ACTUAL”, Università degli Studi di Catania, 2021

Postdoctoral Researcher in Analytical Chemistry “*Microfluidic devices for ultrasensitive detection of biomarkers*”, Università degli Studi di Catania, 2019-2020

Researcher in “*Ultrasensitive detection of nucleic acids by nanoparticle – enhanced surface plasmon resonance imaging (SPRI)*”, Consorzio Interuniversitario di Ricerca in Chimica dei Metalli nei Sistemi Biologici (C.I.R.C.M.S.B.), 2016-2019

Internship with University of Twente, Molecular Nanofabrication group (MnF), University of Twente, Enschede, The Netherlands, 2017

Researcher in “*Metodi di rivelazione ultrasensibili di acidi nucleici basati su Surface Plasmon Resonance Imaging (SPRI)*”, Università degli Studi di Catania, 2015-2016

Researcher in PON02\_00355\_3416798: “*Elettronica su Plastica per Sistemi “Smart disposable” - PLAST\_Ics*” project, Istituto Nazionale Biostrutture e Biosistemi (I.N.B.B.), Consorzio Interuniversitario, 2014-2015

## Awards

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Best Poster Award in Healthy Research, Istituto Nazionale Biostrutture e Biosistemi (I.N.B.B.), Consorzio Interuniversitario, 2022

Primo Levi 2021 Award – Finalist, Società Chimica Italiana – gruppo giovani, 2021

Medaglia Leonardo Da Vinci Award, Conferenza dei Rettori delle Università Italiane, 2020

Best Poster Award in Healthy Research, Istituto Nazionale Biostrutture e Biosistemi (I.N.B.B.), Consorzio Interuniversitario, 2019

Merit-based scholarship of Erasmus Plus Project 2016, Università degli Studi di Catania, 2016

Merit-based scholarship of Bachelor Degree in Chemistry, Dipartimento di Scienze Chimiche, Università degli Studi di Catania, 21012

## Publications

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- Exploiting the design of surface plasmon resonance interfaces for better diagnostics: a perspective review  
*Talanta* 2024, 266, 1, 125033.
- Plasmonic aptasensor with antifouling dual-functional surface layer for lysozyme detection in food  
*Anal. Chim. Acta* 2023, 1283, 341979
- Isothermal circular strand displacement-based assay for microRNA detection in liquid biopsy  
*Anal. Bioanal. Chem.* 2022, 414, 22, 6431–6440.
- Nanoparticle-enhanced surface plasmon resonance imaging enables the ultrasensitive detection of non-amplified cell-free fetal DNA for non-invasive prenatal testing  
*Anal. Chem.*, 2022, 94, 2, 1118–1125.
- Detection of tumor DNA in human plasma with a functional PLL-based surface layer and plasmonic biosensing  
*ACS Sens.* 2021, 6, 6, 2307-2319
- Label free detection of miRNA-21 with electrolyte gated organic field effect transistors (EGOFETs)  
*Biosens. Bioelectron.* 2021, 182, 113144
- Recent advances in antifouling materials for surface plasmon resonance biosensing in clinical diagnostics and food safety  
*Polymers* 2021, 13, 12, 1929.
- A new ultralow fouling surface for the analysis of human plasma samples with surface plasmon resonance  
*Talanta* 2021, 221, 121483.
- Direct plasmonic detection of circulating RAS mutated DNA in colorectal cancer patients  
*Biosens. Bioelectron.* 2020, 170, 112648.
- Surface plasmon resonance for biomarker detection: advances in non-invasive cancer diagnosis  
*Front Chem* 2019, 7: 570.

## International & National Conferences

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Author and co-author of 38 oral and poster presentations at national and international conferences.