

Federica Recupido



Personal information

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Date of birth: 07/06/1991, Atripalda (Avellino), Italy

Education

February 2017-Current position

Ph.D. candidate

School of Chemistry, Chemical Technology Division, Aristotle University of Thessaloniki, Thessaloniki (Greece).

Joined Ph.D. project with Department of Chemical, Materials and Industrial Production Engineering (DICMaPI), University of Naples, “*Federico II*”, Naples (Italy).

Thesis title: “*Effect of wetting phenomena on biofilm formation and removal*”.

Tutors: Prof. T.D. Karapantsios, M. Kostoglou and S. Caserta.

February 2014-September 2016

Master’s Degree in Food Engineering (Master’s Degree in Chemical Engineering), (110/110 cum laude)

University of Salerno, Fisciano (Salerno), Italy.

Thesis title: “*Nanoliposomes production for nutraceutical purposes, based on a simil-microfluidic approach*”.

Tutors: Prof. Anna Angela Barba and Prof. Gaetano Lamberti

September 2010-December 2013

Bachelor’s Degree in Chemical Engineering (107/110)

University of Salerno, Fisciano (Salerno), Italy.

Thesis title: “*Thermo-physical characterization of high moisture-content-food matrices*”

Tutors: Prof. Anna Angela Barba and Prof. Gaetano Lamberti

September 2005-June 2010

Scientific High School Diploma (100/100)

Liceo Scientifico R. D’Aquino, Montella (AV), Italy.

Scholarships

- *Postgraduate studies:*
 - Marie Curie ITN, Complex Wetting Phenomena.
 - Research scholarship with partnership of Heinz Spa.
 - Research scholarship with Italian Society of Rheology (SIR).
 - Research project “BIOFEEDSTOCK PON 2014-2020”

Research skills

Thesis co-supervisor:

- “*Influence of culture conditions on Pseudomonas fluorescens biofilm morphology*”, Author: Daisy Villano, Master’s Degree in Biomedical Engineering, January 2018).
- “*The role of flow on bacterial biofilm formation, morphology and wetting properties*”, Author: Anna Panariello, Master’s Degree in Biomedical Engineering, June 2019.
- *Characterization of formation and wetting properties of Pseudomonas fluorescens biofilms*”, Author: Francesca Mauro, Master’s Degree in Industrial Bioengineering, July 2019.

Teaching assistant for Thermodynamic courses (academic year 2017-2018).

Main research skills:

- Bacterial cell culturing/Biofilm cultivation.
- Fluidodynamics.
- Wetting.
- Advanced microscopy such as confocal laser scanning microscopy (CLSM).
- Surface characterisation.

Digital Skills

- Optimal knowledge of Office package.
- Good knowledge of software like MATLAB, Comsol Multiphysics (CFD module), Image J, Image Pro Plus, Origin-Lab, Sigma Plot, AutoCAD.

Languages Skills

- *Mother tongue:* Italian
- *Other languages:* English: B.2.

Other skills

Attendances to conferences and meetings:

- **International Symposium of Virtualization of Processes in Food Engineering**, University of Salerno, School of Engineering, 1 st-3 rd October 2014, Fisciano (SA) (Italy): **Attendance.**
- **Marie Curie ITN, Cowet Winter School**, *Dynamics of forced wetting and innovative functional surfaces*, 21 st-24 th February 2017, Thessaloniki/Metsovo (Greece), **Attendance.**
- **Marie Curie ITN, Cowet Summer School**, *Nanomaterials: formation and applications*, 15th -18 th May 2017, Jerusalem (Israel), **Oral presentation.**
- **Marie Curie ITN, Last Cowet Meeting**, 21 st-24 th November 2017, Darmstadt (Germany), **Oral presentation.**

Contributions to national and international conferences

- Bochicchio S., Dalmoro A., **Recupido F.**, Lamberti G., Barba A.A., Nanoliposomes production based on a simil-microfluidic approach, International Workshop BIONAM 2016, 6th-7th October 2016, Salerno (Italy), Abstract pages n° 1.
- **Recupido F.**, Villano D., Toscano G., Tate' R., Petala M., Caserta S., Guido S. and Karapantsios T.D., Effect of Flow on Biofilm Formation and Morphology, Cost Flowing Matter (Cost Action MP1305), 5 th-9 th February 2018, Lisbon (Portugal): Abstract pages n° 1, **Oral presentation.**
- **Recupido F.**, Toscano G., Tate' R., Petala M., Caserta S., Guido S. and Karapantsios T.D., Flow Induced Morphology in Bacterial Biofilms, Annual European Rheology Conference (AERC), 17 th-20 th April 2018, Sorrento (Italy), Abstract pages n°1, **Poster.**
- **Recupido F.**, Villano D., Toscano G., Tate' R., Petala M., Caserta S., Guido S. and Karapantsios T.D., Effect of Flow on Pseudomonas fluorescens Biofilm Formation, Morphology and Wetting Properties, ESA Melissa Agrospace Workshop, 16 th May-18 th May 2018, Rome (Italy), Abstract pag n°1, **Poster.**
- **Recupido F.**, Toscano G., Tate' R., Petala M., Caserta S., Guido S. and Karapantsios T.D., Effect of Flow on Bacterial Biofilm Formation, Morphology and Wetting Properties, EUSMI/SoftComp Annual Meeting, 28 th May 2018-31 st May 2018, Primošten (Croatia), Abstract pag n° 2, **Oral presentation.**
- **Recupido F.**, Petala M., Kostoglou M., Caserta S., Guido S. and Karapantsios T.D., Wetting/dewetting properties of biofilm-coated surfaces, 3 rd Chemistry conference of graduated and undergraduated students, 22 nd-23 rd November 2019, Thessaloniki (Greece), **Oral presentation.**
- **Recupido F.**, Petala M., Kostoglou M., Caserta S., Guido S. and Karapantsios T.D., Wetting properties of biofilms produced under well controlled shear flow conditions, Biofilm9 (virtual) conference, 29 th September-1 st October 2020, Karlsruhe Institute of Technology (KIT), Germany, **Oral presentation.**
- Castigliano M., **Recupido F.**, Petala M., Kostoglou M., Toscano G., Karapantsios TD, Guido S. and Caserta S, The role of shear flow on biofilm morphology, Annual European Rheology Conference (AERC) 13 th-15 th April 2021, **Oral presentation.**

Publications

1. Bochicchio S., Dalmoro A., Recupido F., Lamberti G., Barba A.A., **Nanoliposomes production based on a simil-microfluidic approach**, *Advances in Bionanomaterials*, Lectures Notes in Bioengineering, (2017), DOI 10.1007/978-3-319-62027-5_1 (Book chapter, pages 3-10).
2. Recupido F., Toscano G., Tatè R., Petala M., Caserta S., Karapantsios T.D. and Guido S., **The role of flow on biofilm morphology and wetting properties**, *Colloids and Surfaces B: Biointerfaces* 192 (2020)111047.
3. Di Somma A., Recupido F., Cirillo A., Romano A., Romanelli A., Caserta S., Guido S. and Duilio A., **Antibiofilm Properties of Temporin-L on Pseudomonas fluorescens in Static and In-Flow Conditions**, *International Journal of Molecular Science* 21(2020) 8526.
4. Castigliano M, Recupido F., Petala M., Kostoglou M, Caserta S and Karapantsios TD, **Wetting of dehydrated hydrophilic Pseudomonas fluorescens biofilms under the action of external body forces**, *Langmuir* (under review).

Extra activities

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Faithfully, 16th April 2021

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