



Dott.ssa Noemi Baldino

RTDA Researcher of Chemical Engineering Principles (S.S.D. ING-IND / 24) at DIMES,
University of Calabria, Rende (CS).

Treasurer of the Italian Society of Rheology (SIR)

Since 07/04/2017 She acquired the National Scientific Qualification (S. S. D. 09 / D2 SYSTEMS, METHODS AND TECHNOLOGIES OF CHEMICAL AND PROCESS ENGINEERING) as Associate Professor (art. 16, paragraph 1, Law 240/10);

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Career Summary

- **2005 - 2006** - Research fellowship at the Department of ELECTRONICS, COMPUTERS and SYSTEMS of the University of Calabria entitled "Compartmentalization of warehouses in the agro-food chain based on" air knife "technology.
- **January 2006 - July 2006** she worked at the United Biscuits research and development center in High Wycombe (UK), on the rheology of chocolate and biscuits;
- **February 2008** - PhD in Chemical and Materials Engineering;
- **2008 - 2009** Research internship sponsored by the University of Calabria and the CNR entitled "Innovative processes for extracting the active ingredients of medicinal plants typical of Calabria".
- **2009 - 2010** - Research fellowship at the Department of Engineering Modeling Department of the University of Calabria entitled "Use of supercritical CO₂ in extractive processes".

- **2010 - 2013** Research fellow at the Department of Engineering Modeling Department of the University of Calabria entitled "Extraction processes with solvents to the Supercritical State", tutor Prof. Bruno de Cindio.
- **2013 - 2018:** Research fellow at the DIMES Department of the University of Calabria entitled "Fluid dynamic modeling of spreadable oil", tutor Prof. Bruno de Cindio, as part of the PON 01_00293 Spread Bio-Oil project.
- **December 2018** - Visiting researcher at the Applied Rheology and Technology of Colloids laboratory in the Department of Chemical Engineering (Faculty of Chemistry) of the University of Seville (Spain) on the rheological characterization of plant-based proteins.

Research interests and teaching activities

Her research interests are in the areas of rheology and modeling of complex systems of interest for chemical engineering. In particular, she deals with the study of products and processes of cereal systems, the study of bituminous materials and complex systems at the interfaces. The techniques used are both experimental, mainly of bulk and interfacial rheology (biaxial and shear), and numerical.

Noemi Baldino has published about 50 articles in international journals with peer reviews, about 100 works that appeared in encyclopedia, book chapters and conference proceedings at international and national conferences. He is also co-inventor of 2 patents.

She has attended at more than 20 national and international conferences, at many research groups and has been a teacher within the Industrial Rheology School of the Italian Association of Rheology.

She is currently

- Teacher of the course of "Mechanics of Newtonian and non-Newtonian fluids" LM - Science and Engineering of Innovative and Functional Materials of the Department of Physics, University of Calabria (SSD ING-IND24) whose teaching sheet is available at following link:
https://www.unical.it/portale/portaltemplates/view/view_scheda_insegnamento.cfm?45091&45091.
- She holds the exercises of the course of Transport Phenomena in Food Systems (9 CFU Degree in Food Engineering);
- She holds the exercises of the course of Principles of Chemical Engineering (Degree in Environmental and Chemical Engineering).
- Lecturer in the II ° Level Higher Education Master in "Nutrition and nutraceutical integration", at the Department of Pharmaceutical Sciences of the University of Calabria for the teaching module: "Extraction of nutraceuticals using innovative technologies."

Dr. Noemi Baldino held the exercises of the course "Mechanics of Newtonian and non-Newtonian fluids", of the Chemistry course for Computer Engineering, of the Thermodynamics course, of the Rheology course, of the Principle of Agro-food Engineering course. She is also a scientific referent for research projects.

Selected publication (Journal papers published since 2015).

1. Lupi, F. R., Franco, G., Baldino, N., Gabriele, D. (2020), The effect of operating conditions on the physicochemical characteristics of whey proteins-based systems, *Rheologica Acta*, 59(4),

227-238, ISSN 0035-4511, Springer-Verlag GmbH, Heidelberg, Germany, DOI: 10.1007/s00397-020-01197-6.

2. Baldino, N., Carnevale, I., Laitano, F., Lupi, F.R., Curcio, S., Gabriele, D., (2020), Formulation of bread model doughs with resistant starch, vegetable proteins and transglutaminase, *European Food Research and Technology*, 246, 397-408, DOI: 10.1007/s00217-019-03409-7, ISSN 1438-2377, Springer-Verlag GmbH, Heidelberg, Germany.
3. Lupi, F. R., Puoci, F., Bruno, E., Baldino, N., Marino, R., Gabriele, D. (2020), The effects of process conditions on rheological properties of functional citrus fibre suspensions, *Food and Bioproducts Processing*, 121, 54-64, DOI: 10.1016/j.fbp.2020.01.01, ISSN 0960-3085, Institution of Chemical Engineers, Rugby, England.
4. Baldino, N., Angelico, R., Caputo, P., Gabriele, D., Oliviero Rossi, C., (2019), Effect of high water salinity on the adhesion properties of model bitumen modified with a smart additive, *Construction and Building Materials*, 225, 642-648, DOI: 10.1016/j.conbuildmat.2019.07.138, ISSN 0950-0618, Elsevier Sci Ltd, Oxford UK, pubblicato online 25/07/2019.
5. Lupi, F.R., De Santo, M.P., Ciuchi, F., Baldino, N., Gabriele, D., (2018). The role of edible oils in low molecular weight organogels rheology and structure, *Food Research International*, Elsevier B.V. Amsterdam, The Netherlands, ISSN:0963-9969, Vol.111, pp 399-407, September 2018
6. Lupi F.R., Mancina V., Baldino N., Parisi O.I., Scrivano L., Gabriele D., (2018). Effect of the monostearate/monopalmitate ratio on oral release of active agents from monoacylglycerols organogels, *Food and Function*, Royal Society of Chemistry Publishing, ISSN: 20426496, Royal Society of Chemistry, Thomas Graham House (290), Science Park, Milton Road, Cambridge, CB4 0WF, Vol. 9, 6, pp 3278-3290, June 2018.
7. Baldino N., Laitano F., Lupi F.R., Curcio S., Gabriele D. (2018). Effect of HPMC and CMC on rheological behavior at different temperatures of gluten-free bread formulations based on rice and buckwheat flours, *European Food Research and Technology* ISSN: 1438-2377 (Print) 1438-2385 (Online), Springer Verlag, (Berlino, Germania), Vol. 244, 10, 1829-1842, pubblicato il 1 October 2018, Pages
8. Baldino, N., Mileti, O., Lupi, F.R., Gabriele, D. (2018). Rheological surface properties of commercial citrus pectins at different pH and concentration, *LWT Food Science and Technology*, Volume 93, p. 124-130, ISSN: 00236438, DOI: 10.1016/j.lwt.2018.03.037, Elsevier Science BV, Amsterdam, The Netherlands, July 2018;
9. Shakeel, A., Lupi, F.R., Gabriele, D., Baldino, N., De Cindio, B. (2018). Bigels: A unique class of materials for drug delivery applications (In press), *Soft Materials*, Volume 16, Issue 2, Pages 77-93, ISSN: 1539445X, DOI: 10.1080/1539445X.2018.1424638, TAYLOR & FRANCIS INC, 530 WALNUT STREET, STE 850, PHILADELPHIA, PA 19106 USA, pubblicato il 3 April 2018,
10. Noemi Baldino, Cesare Oliviero Rossi, Francesca Romana Lupi, Domenico Gabriele (2017). Rheological and structural properties at high and low temperature of bitumen for warm

recycling technology, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, Vol. 532, p. 592-600, ISSN:0927-7757, doi.org/10.1016/j.colsurfa.2017.02.069, Elsevier B.V. (New York, Stato di New York, USA), pubblicato il 05-11-2017;

11. Lupi, F.R., De Santo, M.P., Ciuchi, F., Baldino, N., Gabriele, D. (2017). A rheological modelling and microscopic analysis of bigels. *Rheologica Acta*, Volume 56, Issue 9, 1 September 2017, p. 753-763, ISSN: 00354511, DOI: 10.1007/s00397-017-1030-3, Springer-Verlag GmbH Germany, pubblicato il 1 September 2017;
12. Baldino, N., Gabriele, D., Gentile, L., Carnevale, I., Lupi, F.R., de Cindio, B., De Luca, M.C. (2017). Drying of sausages made from the meat of black and white pigs: Numerical modeling and structural investigation. *Drying Technology*, Vol 35, Issue 6, p. 724-735, ISSN: 07373937, DOI: 10.1080/07373937.2016.1209681, 26 April 2017, Taylor and Francis Inc., Park Square Milton Park Abingdon (UK).
13. Francesca R Lupi, Ahmad Shakeel, Valeria Greco, Noemi Baldino, Vincenza Calabrò, Domenico Gabriele (2017). Organogelation of extra virgin olive oil with fatty alcohols, glyceryl stearate and their mixture, *LWT-Food Science and Technology*, vol 77, p. 422-429, ISSN: 0023-6438, doi.org/10.1016/j.lwt.2016.11.082, 1 April 2017, Academic Press Inc. (Cambridge, Massachusetts, Stati Uniti).
14. Cesare Oliviero Rossi, Paolino Caputo, Noemi Baldino, Elisabeta Ildyko Szerb, Bagdat Teltayev (2017). Quantitative evaluation of organosilane-based adhesion promoter effect on bitumen-aggregate bond by contact angle test. *International Journal of Adhesion and Adhesives*, vol. 72, p 117-122, ISSN: 0143-7496, doi.org/10.1016/j.ijadhadh.2016.10.015; January 2017, Elsevier Ltd. (New York, Stato di New York, USA).
15. Lupi F R, Gabriele, D., Baldino N, de Cindio B, Spina, C., Avino, S. (2017) Rheologically-controlled edible coatings for frozen vegetables [Article@Film Edibili a reologia controllata per la ridapertgera di vegetali da surgelare], *Industrie Alimentari*, 56 (580), pp. 15-26. ISSN: 0019901X, Giugno 2017, Chiriotti Editori srl, Viale Rimembranza, 60 - 10064 Pinerolo – To (Italy), pubblicato nel giugno 2017;
16. Lupi F R, Greco V, Baldino N, de Cindio B, Fischer P, Gabriele D (2016). The effects of intermolecular interactions on the physical properties of organogels in edible oils . *JOURNAL OF COLLOID AND INTERFACE SCIENCE*, vol. 483, p. 154-164, ISSN: 0021-9797, doi: 10.1016/j.jcis.2016.08.009, Academic Press Inc. (Cambridge, Massachusetts, Stati Uniti), pubblicato il 01/12/2016
17. Lupi FR, Shakeel A, Greco V, Oliviero Rossi C, Baldino N, Gabriele D (2016). A rheological and microstructural characterisation of bigels for cosmetic and pharmaceutical uses. *MATERIALS SCIENCE AND ENGINEERING. C, BIOMIMETIC MATERIALS, SENSORS AND SYSTEMS*, vol. 69, p. 358-365, ISSN: 0928-4931, doi: 10.1016/j.msec.2016.06.098, Elsevier Ltd. (New York, Stato di New York, USA), pubblicato il 01/12/2016.
18. Oliviero Rossi C, Caputo P, Baldino N, Lupi FR, Miriello D, Angelico R (2016). Effects of adhesion promoters on the contact angle of bitumen-aggregate interface. *INTERNATIONAL JOURNAL OF ADHESION AND ADHESIVES*, vol. 70, p. 297-303, ISSN: 0143-7496, doi:

10.1016/j.ijadhadh.2016.07.013, October 2016, Elsevier Ltd (New York, Stato di New York, USA).

19. Lupi FR, Gentile L, Gabriele D, Mazzulla S, Baldino N, de Cindio B (2015). Olive oil and hyperthermal water bigels for cosmetic uses. JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol. 459, p. 70-78, ISSN: 0021-9797, doi: 10.1016/j.jcis.2015.08.013, Academic Press Inc. (Cambridge, Massachusetts, Stati Uniti), pubblicato il 01/12/2015.
20. Mazzulla S, Schella A, Gabriele D, Baldino N, Sesti S, Perrotta E, Costabile A, de Cindio B (2015). Oxidation of human red blood cells by a free radical initiator: Effects on rheological properties. CLINICAL HEMORHEOLOGY AND MICROCIRCULATION, vol. 60, p. 375-388, ISSN: 1386-0291, doi:10.3233/CH-141841, 12 October 2015, IOS Press Amsterdam, Paesi Bassi.
21. Lupi FR, Gabriele D, Seta L, Baldino N, de Cindio B, Marino R (2015). Rheological investigation of pectin-based emulsion gels for pharmaceutical and cosmetic uses. RHEOLOGICA ACTA, vol. 54, p. 41-52, ISSN: 0035-4511, doi: 10.1007/s00397-014-0809-8 6 2015, Springer Verlag, (Berlino, Germania), pubblicato il 01/01/2015

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