

GENERAL INFORMATION

Name: Salvatore
Surname: Costanzo
Birth: Naples (Italy), 29 June 1983
Nationality: Italian
Marital status: married, one child
Researcher ID: <http://orcid.org/0000-0003-1780-389X>
Google Scholar: <https://scholar.google.it/citations?user=2wRJvVQAAAAJ&hl=it>

EDUCATION

16/06/2010	Bachelor in Chemical Engineering. University of Naples “Federico II”, Italy. Thesis: <i>Concentration Effects on the Sol-gel Transition of Cellulose Derivatives.</i> Advisor: prof. Nino Grizzuti.
27/09/2013	Masters in Chemical Engineering. University of Naples “Federico II”, Italy. Thesis: <i>Large Amplitude Oscillatory Shear Tests on Micellar Solutions.</i> Advisor: prof. Nino Grizzuti.
From 18/11/2013 to 24/02/2017	PhD in Materials Science (ITN Supolen). University of Crete, Department of Materials Science and Technology and Foundation for Research and Technology - Hellas (FORTH), Greece. Thesis: <i>Development of Protocols for Investigating Linear, Branched and Supramolecular Polymers Undergoing Shear.</i> Advisor: prof. Dimitris Vlassopoulos.

WORK EXPERIENCE

From 01/04/2017 to date	Postdoctoral Researcher. University of Montpellier, France. Laboratoire Charles Coulomb. Project: Funhybiopol (funded by SAS Pivert) Advisor: dr. Laurence Ramos.
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CURRENT RESEARCH INTERESTS/EXPERIENCE

- Linear and nonlinear rheology of molten polymers and nanocomposites.
- Instrumental development with emphasis on nonlinear rheology.
- Dynamics and structure of associating polymers (dendronized, telechelics).
- Linear and Nonlinear Rheology of gluten doughs.

EXPERIMENTAL SKILLS

- Experimental rheology.
- Computer design and machining of mechanical instrumentation.

- Software for data analysis and scientific writing (Reptate, Sigmaplot, Origin, Microsoft Excel, Latex).

LANGUAGES

- Italian (mother tongue)
- English (full professional working proficiency)
- French (elementary proficiency)
- Greek (elementary proficiency)

EXPERIENCE IN OTHER RESEARCH INSTITUTIONS

From 15/10/2014 to 21/12/2014	Academic guest at ETH Zurich (polymer chemistry group of prof. A. Dieter Schlüter (Switzerland)).
From 13/05/2016 to 29/05/2016	Academic guest at the Danish Polymer Center (rheology group of prof. Ole Hassager), DTU Copenhagen (Denmark).
From 19/09/2016 to 02/10/2016	Industrial secondment at DSM Ahead in the context of the European project of Supolen Initial Training Network, Geleen (Netherlands)

As a member of the European Project of Supolen Initial Training Network, advanced training short courses in:

- Molecular Rheology (Crete, 06/2014).
- Computational Physics and Particle Dynamics (Netherlands, 09/2014).
- Extensional Rheology (Denmark, 03/2015).
- Nuclear Magnetic Resonance and Broadband Dielectric Spectroscopy (Leeds, 04/2016).
- Light and X-ray scattering (Montpellier 09/2016).

PUBLICATIONS

1. Zhi-Chao Yan, **Salvatore Costanzo**, Youncheol Jeong, Taihyun Chang, and Dimitris Vlassopoulos. Linear and Nonlinear Shear Rheology of a Marginally Entangled Ring Polymer. *Macromolecules* **2016**, 49 (4), 1444-1453. DOI: <https://doi.org/10.1021/acs.macromol.5b02651>
2. Guilhem P. Baeza, Claudia Dessi, **Salvatore Costanzo**, Dan Zhao, Shushan Gong, Angel Alegria, Ralph H. Colby, Michael Rubinstein, Dimitris Vlassopoulos, and Sanat K. Kumar. Network Dynamics in Nanofilled Polymers. *Nature Communications* **2016**, 7, 11368. DOI: <https://doi.org/10.1038/ncomms11368>
3. **Salvatore Costanzo**, Qian Huang, Giovanni Ianniruberto, Giuseppe Marrucci, Ole Hassager, and Dimitris Vlassopoulos. Shear and Extensional Rheology of Polystyrene Melts and Solutions with the Same Number of Entanglements. *Macromolecules* **2016**, 49 (10), 3925-3935. DOI: <https://doi.org/10.1021/acs.macromol.6b00409>

4. **Salvatore Costanzo**, Leon Scherz, Thomas Schweizer, Martin Kröger, George Floudas, Dieter A. Schlüter, and Dimitris Vlassopoulos. Rheology and Packing in Dendronized Polymers. *Macromolecules* **2016**, 49 (18), 7054-7068. DOI: <https://doi.org/10.1021/acs.macromol.6b01311>
5. Qian Huang, **Salvatore Costanzo**, Chinmay Das and Dimitris Vlassopoulos. Stress Growth and Relaxation of Dendritically Branched Macromolecules in Shear and Uniaxial Extension. *Journal of Rheology* **2017**, 61 (1), 35-47. DOI: <https://doi.org/10.1122/1.4966040>
6. Leon F. Scherz, **Salvatore Costanzo**, Qian Huang, Dieter A. Schlüter, and Dimitris Vlassopoulos. Dendronized Polymers with Ureido-Pyrimidinone Groups: an Efficient Strategy to Tailor Intermolecular Interactions, Rheology and Fracture. *Macromolecules*, **2017**, 50 (13), 5176-5187. DOI: <https://doi.org/10.1021/acs.macromol.7b00747>
7. **Salvatore Costanzo**, Rossana Pasquino, Roberto Donato and Nino Grizzuti. Effect of Polymer Concentration and Thermal History on the Inverse Thermogelation of Hydroxypropylcellulose Aqueous Solutions. *Polymer*, **2017**, 132, 157-163. DOI: <https://doi.org/10.1016/j.polymer.2017.10.066>
8. **Salvatore Costanzo**, Giovanni Ianniruberto, Giuseppe Marrucci and Dimitris Vlassopoulos. Measuring and Assessing First and Second Normal Stress Differences of Polymeric Fluids with a Modular Cone-Partitioned-Plate Geometry. *Rheologica Acta*, **2018**. DOI: <https://doi.org/10.1007/s00397-018-1080-1>
9. Daniele Parisi, **Salvatore Costanzo**, Youncheol Jeong, Junyoung Ahn, Taihyun Chang, Dimitris Vlassopoulos, Alexander Y. Grosberg, Jonathan D. Halverson, Ting Ge, Michael Rubinstein, and Gary S. Grest. Nonlinear Shear Rheology of Entangled Polymer Rings. *In preparation*
10. Luke T Andriano, Nino Ruocco, Joseph D Peterson, Daniel P Olds, **Salvatore Costanzo**, Dimitris Vlassopoulos, Matthew E Helgeson, Nikos Hadjichristidis, Rex P Hjelm and Leslie Gary Leal. Nonlinear Microstructural Characterization of a Star-Linear Polymer Melt Under Shear Flow by Using Rheo-SANS. *In preparation*.
11. Helen Lentzakis, **Salvatore Costanzo**, Dimitris Vlassopoulos, Ralph H Colby, Daniel J Read, Evelyne van Ruymbeke. Constraint Release mechanisms for an H Polymer Moving in a variety of Linear Matrices. *In preparation*
12. Justine Pincemaille, Amelie Blanc, **Salvatore Costanzo**, Edouard Chauveau, Marie-Hélène Morel, Paul Menut and Laurence Ramos. Phase separation dynamics of gluten protein mixtures. *In preparation*

CONFERENCE PRESENTATIONS

- 04/2014 *Concentration Effects on the Sol-gel Transition of HPC Aqueous Solutions*. Annual European Rheology Conference. Karlsruhe (Germany)
- 07/2014 *Concentration and Heating Rate Effects on the Sol-gel Transition of Hydroxypropylcellulose Aqueous Solutions*. Hellenic Society of Rheology Conference. Heraklion (Greece).
- 07/2014 *Unusual Dynamics in Dendronized Polymers*. A Special Rheology Symposium in Honor of prof. Roger I. Tanner. Samos (Greece).
- 04/2015 *Hybrid Dendronized Polymers: a New Class of Polymers with Tunable Rheology*. Annual European Rheology Conference. Nantes (France).
- 03/2016 *Nonlinear Shear Rheology of Polystyrene Melts and Solutions with the Same Number of Entanglements*. Swiss Soft Days 18th ed. Zurich (Switzerland).
- 02/2017 *Tunable Rheology of Dendronized Polymers*. 88th Annual Meeting of the Society of Rheology. Tampa (Florida).
- 04/2018 *Aging and Rheology of Gluten Doughs*. Annual European Rheology Conference. Sorrento (Italy).

CONFERENCE POSTERS

- 04/2016 *Rheology of Supramolecular Dendronized Polymers*. Annual European Rheology Conference. Zurich (Switzerland).
- 09/2016 *Nonlinear Rheology of Entangled Polystyrene Melts and Solutions*. International Soft Matter Conference. Grenoble (France).
- 11/2016 *Rheology of Linear Polystyrene Melts and Solutions with the Same Number of Entanglements*. 11th Hellenic Polymer Society International Conference. Heraklion (Greece).
- 11/2016 *Rheology and Packing of Dendronized Polymers*. 11th Hellenic Polymer Society International Conference. Heraklion (Greece).
- 11/2016 *Stress Growth and Relaxation of Dendrimers in Shear and Uniaxial Extension*. 11th Hellenic Polymer Society International Conference. Heraklion (Greece).

AWARDS

- 09/2014 Panta Rei Award 2014 from the Italian Society of Rheology for best masters thesis 2013.
- 11/2016 Best Poster Award at the 11th Hellenic Polymer Society International Conference.

SUPERVISING ACTIVITY

Lab advisor of bachelor and master students.

REVIEWING ACTIVITY

Reviewer for peer reviewed journals of the Royal Society of Chemistry (RSC), Springer, the American Physical Society (APS) and the American Chemical Society (ACS).

References available upon request