

## CV of Ioanna Mandala Associate Professor

Laboratory of Food Engineering, Department of Food Science and Human Nutrition  
School of Food and Nutritional Sciences, Agricultural University of Athens  
Iera Odos 75, 118 55 Athens, Greece  
Status: Married, 2 kids  
Tel.: + 30 210 529 4692; Fax: + 30 210 529 4697; e-mail: [imandala@aua.gr](mailto:imandala@aua.gr)

### Current position

2011- Associate Professor in Physical Properties of Foods, Agricultural University of Athens

### Research interests

1. Formulations engineering in the category of: a) bakery (bread and gluten-free breads) - confectionary products and of: b) emulsion-type products through physical properties and sensory evaluation
2. Rheology and microstructure of polysaccharides. Special focus on prebiotic fibers and hydrocolloids rheological attributes. Their impact in: a) model and final food physical characteristics, b) Storage stability
3. Influence of size reducing process like micronization and ultrasonication: a) on producing micro-grinded flour powders b) on the production & stability of sub-micrometer (nano) emulsions

### Education

1997-2002 PhD in Food Engineering, Dept. Food Science & Technology, Agricultural University of Athens (AUA) *Thesis: Texture & microstructure of products that contain starch. Improvement of their quality by gum addition* (xanthan)

1987-2/1993 Diploma in Chemical Engineering, National Technical University of Athens (NTUA), Greece. *Thesis: Dietary fibers* (Determination and addition in foods)

### Scholarships

Post-graduate studies (State Scholarships Foundation of Greece (I.K.Y.) (1998-2002)

French Embassy foundation (1999)

Erasmus-Free Movers programme (2000)

Erasmus (Lifelong learning programme) (2008)

### Research Experience

2010 Rutgers University, *Dept. Food Science*, New Jersey, USA. Bio-polymers interactions and their impact on o/w nanoemulsion stabilization (Dr. Q. Huang lab), sabbatical leave (15/3-10/6)

2008 AgroParisTech (ENSIA), Ecole Nationale Supérieure des Industries Agricoles et Alimentaires. *Dépt. Science de l'Aliment*. Emulsion stabilization process & techniques (Dr. C. Michon)

2000 AgroParisTech (ENSIA). Laboratoire de Biophysique des Matériaux Alimentaires. Starch-xanthan interactions investigation (Dr. B. Launay lab), thesis work (1/1-30/6)

1999 AgroParisTech (ENSIA). *Dépt. Génie des Procédés Alimentaires*. Trainee researcher in food processing (one month)

1994 BfEL (*Bundesforschungsanstalt für Ernährung und Lebensmittel*, Karlsruhe, Germany), trainee researcher on dried fruits preservation methods and on sensory analysis methods; «Sensorik» project, training participation (1/7-31/8)

1994- Research assistant at Agricultural University of Athens

### Teaching Experience

2017- Associate Professor, Agricultural University of Athens

Under-graduate study: as described previously including Technology of Foods of Plant and Animal Origin (co-instructor 2017-), Principles of Food Engineering (co-instructor, 2016-), Laboratory of Food Engineering (co-instructor, 2017-)

Post-graduate study: Principles of Food Engineering (co-instructor, 2019-)

2011-2017 Assistant Professor, Agricultural University of Athens,

Under-graduate study: Physical Properties of Foods (2006-), Food packaging (2007-2011), Fruit and vegetable processing (co-instructor, 2008-2016), Food product development (2009-)

Post-graduate study: Food Product Development (2013-)

2006-2011 Lecturer in Agricultural University of Athens

Under-graduate study: Methods of Food Preservation (2006-2009)

Post-graduate study: Food Preservation using physical methods (2007, 2009), Core technologies for Food treatment (2007, 2009), Lectures in the frame of the course ‘‘Technological challenges for functional food production’’ (2007-2008)

1997-2004 Teaching assistant in Food Engineering Laboratory (AUA)

## Supervision of students

More than 20 undergraduate students, twenty post graduate students (master thesis)

PhD studies: Kaltsa O. (2010-2015)

Tsatsaragkou K. (2012-2015)

Protonotariou S. (2012- 2016)

Paximada P. (2013-2017)

In progress: Loukopoulos P. (2018-), Chaloulos P. (2019-), Apostolidis E. (2019-)

## Foreign Languages

French, German, English

## Other activities

- Collaboration for the exchange of students within the ERASMUS EU funded program: France ENSIA, Netherlands WAGENINGEN, Finland VTT, Germany TUM, Spain IATA
- Reviewer of papers for international scientific journals 2017- (J. Food Engineering: 3, Food Hydrocolloids: 12, Carbohydrate Polymers: 6, Food Chemistry: 1, Trends in Food Science & Technology: 1, Journal of Cereal Science: 2, LWT: 2, Innovative Food Science & Emerging Technologies: 5)
- Evaluator of research projects (national and European ones)
- Scientific committee of national and international conferences (ICEF11, FABE)
- Member of local scientific committee of 7<sup>th</sup> Cereals & Europe Spring Meeting, 2020 (postponed for 2021)
- Member of Food Organizations (e.g. IFT ID No. 00113415)
- Seminars participation: ACTI-DAY, Paris, June 2008, web-seminars (gluten-free IFT, 2007)

## Publications with referees

69 publications in international peer-reviewed Journals (Search mandala i\* or mandala j\*) Among them *J. of Food Engineering*, I.F.:2.77-4.99 (12 papers), *Food Hydrocolloids*, I.F.:4.09-7.05 (10 papers), *Carbohydrate Polymers*, I.F.:4.07-7.18 (4 papers), *Food & Bioprocess Technology* I.F.: 3.66 (6 papers). Citations: non-self citations (Scopus search, 11/2020):1770, *h-index*: 26, *Corresponding author*: 42/69

## Presentations in conferences

80 presentations

69 international conferences (examples: ICEF8, 9, 10, 11, Int.Symposium Food Rheology and Structure, EFFoST)

5 workshops

6 in national conferences

13 oral presentations, Full proceedings: 34

## Participation in research projects

Participation in 26 national or international research project as member of the research team, scientific supervisor, or project coordinator.

## Publications

- B1. Kostaropoulos A.E., Mandala J., Spiess W.E.L., Saravacos G.D., 1997, Factors influencing the friction of raisins during processing and handling. *J. of Food Engineering* 33, 385-393
- B2. Kostaropoulos A.E., Mandala I.G., Saravacos G.D., 1997, Rheological properties of beds of raisins. *J. of Texture Studies* 28(3), 305-317
- B3. Reppa A., Mandala J., Kostaropoulos A.E., Saravacos G.D., 1999, Influence of solute temperature and concentration on the combined osmotic and air drying. *Drying Technology* 17 (7&8), 1449-1458
- B4. Mandala\* I.G., Palogou E.D., Kostaropoulos A.E., 2002, Influence of preparation and storage conditions on texture of xanthan-starch mixtures. *J. of Food Engineering* 53, 27-38
- B5. Mandala\* I.G., Palogou E.D., 2003, Effect of preparation conditions and starch/xanthan concentration on gelation process of potato starch systems. *International Journal of Food Properties* 6(2), 311-328
- B6. Mandala\* I.G., Bayas E., 2004, Xanthan effect on swelling, solubility and viscosity of wheat starch dispersions. *Food Hydrocolloids* 18(2), 191-201
- B7. Mandala\* I.G., Daouaher M., 2004, Effect of low sugar raisins (LSR) addition on physical properties of cakes during storage. *J. of Food Process Engineering* 27, 229-245
- B8. Mandala\* I.G., Savvas T.P., Kostaropoulos A.E., 2004, Xanthan and locust bean gum influence on the rheology and structure of a white model-sauce. *J. of Food Engineering* 64(3), 335-342
- B9. Mandala I., Michon, C., Launay B., 2004, Phase and rheological behaviors of xanthan/amylose and xanthan/starch mixed systems. *Carbohydrate Polymers* 58(3), 285-292
- B10. Mandala\* I.G., 2005, Physical properties of fresh and frozen stored, microwave-reheated breads, containing hydrocolloids. *J. of Food Engineering* 66(3), 291-300
- B11. Mandala\* I.G., Anagnostaras E.F., Oikonomou C.K., 2005, Influence of osmotic dehydration conditions on apple air-drying kinetics and their quality characteristics. *J. of Food Engineering* 69, 307-316
- B12. Mandala\* I.G., Sotirakoglou K., 2005, The effect of frozen storage and microwave reheating on some physical attributes of fresh bread containing hydrocolloids. *Food Hydrocolloids* 19, 709-719
- B13. Mandala\* I.G., Daouaher M., 2005, Sensory attributes of cakes containing high amount of low sugar raisins (LSR) as evaluated by consumers and trained panel. *International Journal of Food Science & Technology*, 40(7), 759-769

---

*As Lecturer*

- B14. Mandala\* I.G., Ioannou C.A., Kostaropoulos A.E., 2006, Textural attributes of commercial biscuits. Effect of relative humidity on their quality. *International Journal of Food Science & Technology* 141, 782-789
- B15. Kiskini A, Argiri K, Kalogeropoulos M, Komaitis M, Kostaropoulos A, Mandala I, Kapsokefalou M., 2007, Sensory characteristics and in vitro evaluation of iron dialyzability of a gluten-free bread fortified with iron. *Food Chemistry*, 102(1), 309-316
- B16. Mandala\*I., Karabela D., Kostaropoulos A., 2007, Physical properties of breads containing hydrocolloids stored at low temperature. I. Effect of chilling. *Food Hydrocolloids* 21 (8), 397-406

- B17. Mandala\*I., Kapetanakou A., Kostaropoulos A., 2008, Physical properties of breads containing hydrocolloids stored at low temperature. II. Effect of freezing. *Food Hydrocolloids* 22(8), 1443-1451
- B18. Mandala\* I., Polaki A., Yanniotis S., 2009, Influence of frozen storage on bread enriched with different ingredients. *Journal of Food Engineering* 92(2), 137-145
- B19. Polaki A., Xasapis P., Fasseas C., Yanniotis S., Mandala\* I., 2010, Fiber and hydrocolloid content affect the microstructural and sensory characteristics of fresh and frozen stored bread. *Journal of Food Engineering* 97, 1-7
- B20. Schoenlechner R., Mandala\* I., Kiskini A., Kostaropoulos A., Berghofer E., 2010, Effect of water, albumen and fat on the quality of gluten-free bread containing amaranth (*Amaranthus cruentus*). *International Journal of Food Science & Technology* 45(4), 661-669
- B21. Evageliou V., Karantoni M., Mandala I., Komaitis M., 2010, Compression of gellan gels. Part I: Effect of salts. *International Journal of Food Science & Technology* 45(5), 1076-1080
- B22. Evageliou V., Mazioti M., Mandala I., Komaitis M., 2010, Compression of gellan gels. Part II: effect of sugars. *Food Hydrocolloids* 24(4), 392-397
- B23. Evageliou V., Tseli G., Mandala I., Komaitis M., 2010, Effect of inulin on texture and clarity of gellan gels. *Journal of Food Engineering* 101(4), 381-385
- B24. Kiskini A., Kapsokafalou M., Yanniotis S., Mandala\* I., 2010, Effect of different iron compounds on wheat and gluten-free breads. *Journal of the Science of Food & Agriculture* 90(7), 1136-1145
- 

*As Assistant Professor*

- B25. Panaras G., Moatsou G., Yanniotis S., Mandala\* I., 2011, The influence of functional properties of different whey protein concentrates on the rheological and emulsification capacity of blends with xanthan gum. *Carbohydrate Polymers* 86, 433-440
- B26. Kiskini A., Kapsokafalou M., Yanniotis S., Mandala\* I., 2011, Effect of Iron Fortification on physical and sensory quality of gluten-free bread. *Food Bioprocess Technology* 5, 385-390
- B27. Tsatsaragou K., Yiannopoulos S., Kontogiorgi A., Poulli E., Krokida M., Mandala\* I., 2012, Mathematical approach of structural and textural properties of gluten free bread enriched with carob flour. *Journal of Cereal Science* 56, 603-609
- B28. Protonotariou S. V., Karali E., Evageliou V., Yanniotis S., Mandala\* I., 2013, Rheological and sensory attributes of cream caramel desserts containing fructooligosaccharides (FOS) as substitute sweeteners. *International Journal of Food Science & Technology* 48, 663-669
- B29. Protonotariou S., Evageliou V., Yanniotis S., Mandala\* I., 2013, The influence of different stabilizers and salt addition on the stability of model emulsions containing olive or sesame oil. *J. of Food Engineering* 117(1), 124-132
- B30. Kaltsa O., Michon C., Yanniotis S., Mandala\* I. 2013, Ultrasonic energy input influence on the production of sub-micron o/w emulsions containing whey protein and common stabilizers. *Ultrasonics Sonochemistry* 20(3), 881-891
- B31. Kaltsa O., Georgopoulos T., Yanniotis S., Mandala\* I., 2013, Effect of Enzyme Blends and Dough Strengthening Emulsifier on Extending the Shelf Life of Sandwich Bread Applying Response Surface Methodology. *International Journal of Engineering and Innovative Technology (IJEIT)*, Volume 3(4), 149-161
- B32. Tsatsaragou K., Yiannopoulos S., Kontogiorgi A., Poulli E., Krokida M., Mandala\* I., 2014, Effect of carob flour addition on the rheological properties of gluten free breads. *Food Bioprocess Technology* 7, 868-876

- B33. Protonotariou S., Drakos A., Evageliou V., Ritzoulis C., Mandala\* I., 2014, Sieving fractionation and jet mill micronization affect the functional properties of wheat flour. *J. of Food Engineering* 134,24-29
- B34. Tsatsaragkou K., Gounaropoulos G., Mandala\* I., 2014, Development of gluten free bread containing carob flour and resistant starch. *LWT-Food Science and Technology* 58(1), 124–129
- B35. Kaltsa O., Gatsi I., Yanniotis S., Mandala\* I., 2014, Influence of ultrasonication parameters on physical characteristics of olive oil model emulsions containing xanthan. *F. Bioprocess Technology*, 7, 2038-2049
- B36. Kaltsa O., Paximada P., Mandala I., Scholten E., 2014, Physical characteristics of submicron emulsions upon co-adsorption of proteins and small molecular weight surfactants. *Food Research Int.* 66, 401–408
- B37. Tsatsaragkou K., Papantoniou M., and Mandala\* I., 2015, Rheological, physical and sensory attributes of gluten-free rice cakes containing resistant starch. *Journal of Food Science*, 80(2), E341-8
- B38. Protonotariou S., Mandala I., Rosell C.M., 2015, Jet milling effect on functionality, quality and In Vitro digestibility of whole wheat flour and bread. *Food Bioprocess Technology*, 8, 1319–1329
- B39. Angelidis G., Protonotariou S., Mandala I., Rosell C.M., 2015, Jet milling effect on wheat flour characteristics and starch hydrolysis. *International Journal of Food Science and Technology*, 1-8
- B40. Dimou C., Kopashelis N., Papadaki A., Papanikolaou S., Kookos I.K., Mandala I., Koutinas A..A. 2015, Wine lees valorization: Biorefinery development including production of a generic fermentation feedstock employed for poly(3-hydroxybutyrate) synthesis. *Food Research International*, 73, 81–87
- B41. Tsouko E., Kourmentza C., Ladakis D., Kopsahelis N., Mandala I., Papanikolaou S., Paloukis F., Alves V., Koutinas A. 2015, Bacterial cellulose production from industrial waste and by-product streams. *International Journal of Molecular Sciences*, 16(7), 14832-14849
- B42. Panagopoulou E., Tsouko E., Kapsophelis N., Koutinas A., Mandala I., Evageliou V., 2015, Olive oil emulsions formed by catastrophic phase inversion using bacterial cellulose and whey protein isolate, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 486, 5, 203–210
- B43. Paximada P., Tsouko E., Kopsahelis N., Koutinas A. A., Mandala\* I., 2016, Bacterial cellulose as stabilizer of o/w emulsions. *Food Hydrocolloids* 53, 225–232
- B44. Kaltsa O., Yanniotis S., Mandala\* I., 2016, Stability properties of different fenugreek galactomannans in emulsions prepared by high-shear and ultrasonic method. *Food Hydrocolloids* 52, 487-496
- B45. Paximada P., Koutinas A.A., Scholten E., Mandala\* I.G., 2016, Effect of bacterial cellulose addition on physical properties of WPI emulsions. Comparison with common thickeners. *Food Hydrocolloids* 54, Part B, 245-254
- B46. Tsatsaragkou K., Protonotariou S., Mandala\* I., 2016, Structural role of fibre addition to increase knowledge of non-gluten bread. *Journal of Cereal Science* (review article), 67, 58-67
- B47. Paximada P., Dimitrakopoulou E., Tsouko E., Koutinas A..A., Fasseas C., Mandala\* I., 2016, Structural modification of Bacterial Cellulose fibrils under ultrasonic irradiation. *Carbohydrate Polymers* 150, 5-12
- B48. Kaltsa O., Spiliopoulou N., Yanniotis S., Mandala\* I., 2016, Stability and physical properties of macto-nano/submicron- emulsions stabilized by fenugreek gum. *Food Hydrocolloids* 61,625-632

---

*As Associate Professor*

- B49. Protonotariou S., Batzaki C., Yanniotis S., Mandala\* I. (2016). Effect of jet milled whole wheat flour in biscuits quality. *LWT - Food Science and Technology*, 74, 106–113
- B50. Tsatsaragkou K., Kara, T., Ritzoulis, C., Mandala, I., & Rosell, C. M. (2017). Improving carob flour performance for making gluten-free breads by particle size fractionation and jet milling. *Food and Bioprocess Technology*, 10(5), 831-841

- B51. Zhang X., Guo D., Xue J., Yanniotis S., & Mandala\*, I. (2017). The effect of salt concentration on swelling power, rheological properties and saltiness perception of waxy, normal and high amylose maize starch. *Food and Function*, 8(10), 3792-3802
- B52. Paximada P., Echeleyen Y., Koutinas A. A., Mandala\* I. G., & Lagaron J. M. (2017). Encapsulation of hydrophilic and lipophilized catechin into nanoparticles through emulsion electrospraying. *Food Hydrocolloids*, 64, 123-132
- B53. Panagopoulou E., Evageliou V., Kopsahelis N., Ladakis D., Koutinas A., & Mandala I. (2017). Stability of double emulsions with PGPR, bacterial cellulose and whey protein isolate. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 522, 445-452
- B54. Drakos A., Kyriakakis G., Evageliou V., Protonotariou S., Mandala I., & Ritzoulis C. (2017). Influence of jet milling and particle size on the composition, physicochemical and mechanical properties of barley and rye flours. *Food Chemistry*, 215, 326-332
- B55. Drakos A., Malindretou K., Mandala I., & Evageliou V. (2017). Protein isolation from jet milled rye flours differing in particle size. *Food and Bioprocess Processing*, 104, 13-18
- B56. Kaltsa O., Yanniotis S., Polissiou M., & Mandala\* I. (2018). Stability, physical properties and acceptance of salad dressings containing saffron (*crocus sativus*) or pomegranate juice powder as affected by high shear (HS) and ultrasonication (US) process. *LWT*, 97, 404-413.
- B57. Papakonstantinou E., Chaloulos P., Papalexi A., & Mandala I. (2018). Effects of bran size and carob seed flour of optimized bread formulas on glycemic responses in humans: A randomized clinical trial. *Journal of Functional Foods*, 46, 345-355
- B58. Vouris D.G., Lazaridou A., Mandala I.G., & Biliaderis C. G. (2018). Wheat bread quality attributes using jet milling flour fractions. *LWT*, 92, 540-547
- B59. Aguiéiras E. C. G., Papadaki A., Mallouchos A., Mandala I., Sousa H., Freire D. M. G., & Koutinas A. A. (2019). Enzymatic synthesis of bio-based wax esters from palm and soybean fatty acids using crude lipases produced on agricultural residues. *Industrial Crops and Products*, 139
- B60. Drakos A., Andrioti-Petropoulou L., Evageliou V., & Mandala I. (2019). Physical and textural properties of biscuits containing jet milled rye and barley flour. *Journal of Food Science and Technology*, 56(1), 367-375
- B61. Evageliou V., Panagopoulou E., & Mandala I. (2019). Encapsulation of EGCG and esterified EGCG derivatives in double emulsions containing whey protein isolate, bacterial cellulose and salt. *Food Chemistry*, 281, 171-177
- B62. Papadaki A., Cipolatti E. P., Aguiéiras E. C. G., Pinto M.C.C., Kopsahelis N., Freire D. M. G., . . . Koutinas, A. A. (2019). Development of microbial oil wax-based oleogel with potential application in food formulations. *Food and Bioprocess Technology*, 12(6), 899-909
- B63. Papadaki A., Kopsahelis N., Mallouchos A., Mandala I., & Koutinas A. A. (2019). Bioprocess development for the production of novel oleogels from soybean and microbial oils. *Food Research International*, 126
- B64. Nikolidaki E. K., Mandala I., Zogzas N. P., & Karathanos V. T. (2019). Modeling the rheological properties of currant paste as a function of plasticizers concentration, storage temperature and time and process temperature. *Food Research International*, 116, 1357-1365
- B65. Papadaki A., Kopsahelis N., Freire D. M. G., Mandala I., & Koutinas A. A. (2020). Olive oil oleogel formulation using wax esters derived from soybean fatty acid distillate. *Biomolecules*, 10(1)

- B66. Apostolidis E. & Mandala\* I. (2020). Modification of resistant starch nanoparticles using high-pressure homogenization treatment. *Food Hydrocolloids*, 103
- B67. Protonotariou S., Stergiou P., Christaki M., & Mandala\* I. G. (2020). Physical properties and sensory evaluation of bread containing micronized whole wheat flour. *Food Chemistry*, 318
- B68. Paximada P., Kanavou, E. & Mandala\*, I. G. (2020). Effect of rheological and structural properties of bacterial cellulose fibrils and whey protein biocomposites on electrosprayed food-grade particles. *Carbohydrate Polymers*, 241
- B69. Protonotariou S. Ritzoulis C., Mandala\* I., 2020, Jet milling conditions impact on wheat flour particle size. *Journal of Food Engineering* (in press)

## Chapters in Books

- C1 Panaras G., Moatsou G., Mandala I., 2009, Effect of whey protein type and xanthan gum on the rheological properties and emulsion stability of the final mixtures In: *Gums and Stabilizers for the Food Industry 15*, (P. A. Williams & G. O. Phillips Ed.), RSC:Advancing the Chemical Sciences, ISBN:978-1-84 755-199-3
- C2 Evageliou V., Mazioti M., Tseliou G., Mandala I., Komaitis M., 2009, The effect of sugars on low acyl gellan gels. In: *Gums and Stabilizers for the Food Industry 15*, (P. A. Williams & G. O. Phillips Ed.), RSC:Advancing the Chemical Sciences, ISBN:978-1-84 755-199-3
- C3 Evageliou V., Karantoni M., Mandala I., Komaitis M., 2009, The effect of K<sup>+</sup>, Ca<sup>2+</sup> and their mixtures on low acyl gellan gels. In: *Gums and Stabilizers for the Food Industry 15*, (P. A. Williams & G. O. Phillips Ed.), RSC:Advancing the Chemical Sciences , ISBN:978-1-84 755-199-3
- C4 Mandala I., Kapsokefalou M., 2011, Gluten-free bread: Sensory, physicochemical, and nutritional aspects. In V.R. Preedy, R.R. Watson, & V.B. Patel (Eds.), *Flour and breads and their fortification in health and disease prevention* (pp. 161-169). London, Burlington, San Diego: Academic Press, Elsevier. ISBN: 9780123808868

### *As Assistant Professor*

- C5 Mandala I.G., 2012, Viscoelastic Properties of Starch and Non-Starch Thickeners in Simple Mixtures or Model Food. In J., de Vicente (Ed.), *Viscoelasticity*. InTech - open science, (pp. 217-236), ISBN 980-953-307-335-9
- C6 Mandala I. Rosell C., 2015, Physical Processing of Grains and Flours leading Nutritious Breads. Chapter 11. In C. Rosell. J. Bajerska, A. F. El Sheikha (Eds). *Bread and Its Fortification: Nutrition and Health Benefits* (pp. 206-221), CRC press, ISBN: 9781498701563 (invited author)
- C7 Jafari S.M., Fathi M., Mandala I., 2015, Chapter 13- Emerging product formation. In C.M. Galanakis (Ed.), *Food Waste Recovery. Processing Technologies and Industrial Techniques* (pp. 293-317). Academic Press, Elsevier, ISBN: 978-0-12-800351-0, eBook ISBN: 9780128004197 (invited author)
- C8 Tsatsaragkou K., Paximada P., Protonotariou S., and Mandala I., 2015, Functional Foods In T. Varzakas, C. Tzia (Eds.) *Handbook of Food Processing: Food Safety, Quality, and Manufacturing Processes* (pp. 585-606). CRC Press, ISBN 9781498721776 (invited author)

### *As Associate Professor*

- C9 Jafari, S. M., Paximada, P., Mandala, I., Assadpour, E., & Mehrnia, M. A. (2017). Encapsulation by nanoemulsions. *Nanoencapsulation technologies for the food and nutraceutical industries* (pp. 36-73)

- C10 Mandala I., Apostolidis E. (2020). Rheological characterization of liquid nanoencapsulated food ingredients by viscometers. In: Nanoencapsulation in the food industry, Vol.. 4, Characterization of Nanoencapsulated Food Ingredients, (S. M. Jafari Ed.) Chapter 15, (pp. 529-545)
- C11 Jafari S.M., Fathi M., Mandala I. (2021). Part III, Chapter 13- Emerging product formation. In C.M. Galanakis (Ed.), Food Waste Recovery- Processing Technologies and Industrial Techniques, 2nd edition Academic Press, Elsevier, ISBN-10 : 01282056
- C12 Mandala I., Protonotariou S. (2021). Physical Properties of Foods. In: Engineering Principles of Unit Operations in Food Processing, Vol 1, 1st Edition, ISBN: 9780128184738, Imprint: Woodhead Publishing, Published Date: 1st June 2021 (under preparation)

## Conferences (selection, full proceedings\*\*)

- D1. 34<sup>th</sup> EFFoST International Conference-Bridging high-tech, food-tech and health: Consumer-oriented innovations, Beta-carotene's concentration in high amylose starch nanoparticles prepared with cold gelatinization, Loukopoulos P., Kapama D., Valasi L., Pappas Ch., Bethanis K., Tzamalīs P., Mandala I., November 10-12 2020 (αναρτημένη εργασία) •
- D2. 12<sup>o</sup> Πανελλήνιο Επιστημονικό Συνέδριο Χημικής Μηχανικής, Τροποποίηση νανοσβματιδίων ανθεκτικού αμύλου με χρήση υψηλής πίεσης ομογενοποίησης, Αποστολίδης Ε., Μαντάλα Ι., FE0220, 29-31 Μαΐου 2019 (αναρτημένη εργασία, μέρος δημοσίευσης B66) \*\*
- D3. 8<sup>th</sup> ISFRS, International Symposium on Food Rheology and Structure, Effects of drying and grinding processes in the physical and rheological properties of cactus cladode mucilage (*Opuntia ficus-Indica*), (P046), Chaloulos P., Apostolidis E., Bazanis A., Mandala I., June 17-20, Zurich, 2019, Switzerland, (αναρτημένη εργασία) •
- D4. 20<sup>th</sup> Gums and stabilizers for the food industry, Modification of resistant starch nanoparticles using High Pressure Homogenization treatment, Apostolidis E., Chaloulos P., Mandala I., June 11th -14th 2019, San Sebastian, Spain ((αναρτημένη εργασία) • και άρθρο σε ειδικό τεύχος στο Food Hydrocolloids)
- D5. 20<sup>th</sup> Gums and stabilizers for the food industry, Drying of fruit of *Opuntia ficus-indica* and the effects on its physical characteristics, Giannopoulos P. Chaloulos P., Apostolidis E., Mandala I., June 11th -14th 2019, San Sebastian, Spain (αναρτημένη εργασία) •
- D6. 7<sup>th</sup> *Cereals & Europe Spring Meeting* , Effect of prickly pear (*Opuntia ficus-indica*) juice waste incorporation in biscuits, Chaloulos P., Katsika E., Apostolidis E., Protonotariou S., Mandala I., Thessaloniki, Greece 31/8 – 3/9/2020 (μετάθεση το 2021) (αναρτημένη εργασία) •
- D7. 6<sup>th</sup> *International ISEKI-Food Conference (ISEKI-Food 2021)*, Effect of different carriers during the spray drying of prickly pear (*Opuntia ficus-indica*) juice, Chaloulos P., Mourouti A., Mandala I. μετάθεση 2021 Λευκωσία, Κύπρος στις 23-25/6/2021 (προφορική παρουσίαση) •
- D8. Bakery products quality using wheat local landraces. 4th Workshop about local landraces, 2017, AUA, Athens, Greece (oral presentation) •
- D9. Tsatsaragkou K., Mandala I., Stoforos N.G., 2015, Effect of carob flour on gluten-free bread dough expansion during fermentation. 29<sup>th</sup> *EFFoST Int. Conference, Food Science Research and Innovation: Delivering sustainable solutions to the global economy*, 10-12 November, Athens. Volume II, pp. 755-760
- D10. Paximada P., Papadopoulou E., Evageliou V., Koutinas A. Mandala\* I., 2015, Antioxidant activity of natural or lipophilic epigallocatechin gallate (EGCG) in emulsions containing Bacterial Cellulose, 29<sup>th</sup>

*EFFoST International Conference, Food Science Research and Innovation: Delivering sustainable solutions to the global economy and society*, 10-12 November, Athens. Volume II, pp. 956-96

- D11. Chatzidakis S., Sardi K., Protonotariou S., Mandala I., Stoforos N.G. and Yanniotis S., 2015, Modeling size reduction in an air jet mill using CFD. *29<sup>th</sup> EFFoST Int. Conference, Food Science Research and Innovation: Delivering sustainable solutions*, 10-12 November, Athens. Volume II, pp. 1699-1702
- D12. Protonotariou S., Stergiou P., Christaki M., Mandala\* I., 2015, Effect of jet milled whole wheat flour on bread storage. *29<sup>th</sup> EFFoST International Conference, Food Science Research and Innovation: Delivering sustainable solutions to the global economy and society*, 10-12 November, Athens. Volume II, pp. 1087-1091
- D13. Paximada P., Dimitrakopoulou A.E., Koutinas A., Fasseas C., Mandala I., 2015, Acid hydrolysis to improve the production of Bacterial Cellulose Nanocrystals, *Nanotech: Nanotechnology for a better World*, Paris, FRANCE
- D14. Tsatsaragkou K., Yiannopoulos S., Kontogiorgi A., Poulli E., Krokida M., Mandala\* I., 2012, Carob flour enriched gluten-free bread rheology and structure. *6<sup>th</sup> Central European Congress on Food*, Novi Sad Serbia, May 23<sup>rd</sup> -26<sup>th</sup>
- D15. Mandala I., Huang Q., 2011, Interactions of hydrolysed whey protein fractions/ ι- carrageenan. Their impact in the formation of sub-micrometer o/w emulsions. *ICEF11 Proceedings, Food Process Engineering in a Changing World*, Volume II, 947-948
- D16. Protonotariou S.V., Pappas C., Tarantilis P.A., Polissiou M., Yanniotis S., Evageliou V., Mandala\* I., 2011 Determination of fructooligosaccharides (FOS) with FT-IR in cereals. Their impact as substitute sweeteners in starch based desserts. *ICEF11 Proceedings, Food Process Eng. in a Changing World*, Volume III, 2055-2056

## List of research programmes

1. Exploitation of cactus pear fruit and leaves focusing on innovative food applications Opuntia to new product development «ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ», co-funded by EPANEK in the frame of ESPA2014-2020, total budget: 460.000 €, **Project coordinator**: Scientific supervisor Dr. I. Mandala, (2018-2021)
2. Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020), Research Infrastructure on Food Bioprocessing Development and Innovation Exploitation – Acronym: FOOD INNOVATION RI (2018-2021), Senior Researcher
3. State Scholarship "Reinforcement of Postdoctoral Researchers - 2nd Cycle" (MIS-5033021), implemented by the State Scholarships Foundation (IKY) for the project "Exploitation of Greek wheat landraces for value added bread and pasta development" Mentor of Dr. Styliani Protonotariou
4. Materials, Physical and Nanosciences COST Action MP1206. Substitute Management committee member for Greece, MC Chair: Dr. E. Kny, 2013-2017
5. Novel formulations and nanostructures for enhancing the bioavailability of a bioactive compound. The case of emulsion production "NONASTRU", budget (AUA): 405000€, General Secretariat for Research and Technology, "SYNERGASIA 2011", co-funded by the European Social Fund and National Resources, Scientific coordinator, Scientific supervisor: Dr. I. Mandala (February 2013-June 2015)
6. Gluten-free carob containing bakery products with high protein and dietary fiber content, total budget: 165155€, co-funded by the European Regional Development Fund and the Republic of Cyprus through the Research Promotion Foundation (Project ΥΓΕΙΑ/ΤΡΟΦΗ/0609(BIE)/08), **team leader for AUA**, scientific supervisor: Dr. S. Yannopoulos, 2011-2013

7. Development of macro and mini/nano-emulsions production using various stabilizers and emulsifiers and production of new flavors from plant and crop extracts. IRAKLITOS (ΗΠΑΚΛΕΙΤΟΣ) II Fellowships, Operational Programme (OP) "Education and Lifelong Learning (EdLL), co-funded by the European Social Fund and National Resources, total budget: 45000€, **member of PhD supervising committee**, scientific supervisor: S. Yanniotis, 2010-2013
8. The application of fundamental food-structure-property relationships to the design of foods for health, wellness and pleasure, Cost action, total budget: 85000€, **Management committee member for Greece**, Scientific supervisor: Dr. L.Piazza , 2011-2014
9. High energy jet milling in order to produce fine flour powders & bakery products with enhanced functional and nutritional characteristics "LEA", budget (AUA): 160000€, General Secretariat for Research and technology, **Project coordinator**: Dr. I. Mandala, Scientific supervisor: Dr. C. Biliaderis, 2011-2014
10. Biorefinery development that utilize residues from biodiesel production processes for the production of biodegradable polymers and value-added products, budget (AUA): 211.000€, General Secretariat for Research and Technology, GR, **member of the research team**, scientific supervisor: Argo S.A., 2011 – 2014
11. Determination and study of alternative sweeteners in the group of soluble fibers of high dietary value – Application in confectionery products, total budget: 12.000€, ELKE AUA financial support (scholarship) for young researchers, **scientific supervisor**: Dr. I. Mandala, 2009-2011
12. Integrating Safety and Environmental Knowledge Into Food Studies towards European Sustainable Development, ISEKI Food 3-Mundus 2, total budget: 100000€, EU, **member of research team**, scientific supervisor for AUA: S. Yanniotis, 2009-2011
13. Investigation of allergic effect of proteins from Greek and Cypriot Carob varieties (*Ceratonia siliqua*) with the aim to incorporate them in gluten-free bakery products, Greek-Cypriot bilateral collaboration, total budget:12000€, **main researcher** (young researcher from AUA), scientific supervisor: Dr. M. Papageorgiou, 2007-2009
14. Design of roadmap for the development of functional and organic products, Technology Transfer Centre of Peloponnese (Program Netforce), total budget:5000€, **member of the research team**: Dr. I. Mandala, 2007
15. Development of new products of high dietary value, Science and technology Festival. (EIIAN II, GSRT), total budget:35000€(2006), 25000€(2007), **main researcher**, scientific supervisor: Dr. M. Kapsokefalou, 2006-2008
16. Study of properties and processing of novel foodstuffs made from dried fruit by products. ARXIMIDIS III, GRST, **team of the research team**, scientific supervisor: Dr. N. Zogzas, 2011-2014
17. Development of new products that contain raisins (bakery and dairy products) with emphasis given to their qualitative advantages. Sensory evaluation and identification of ways for their promotion in the market, total budget:(around 15000€), (SYN 96-117 GSRT), **research assistant**, scientific supervisor: A. Kostaropoulos, 1997-2000
18. Construction of a database of physical properties of foods» (FAIR-Project CT96-1063) (Concerted action), **research assistant**, Scientific supervisor: Nesvabda P., www.nelfood.com, 1997-1999
19. Shelf-life prediction for improved safety and quality of foods» (Copernicus project CIPA-CT94-0120) (Concerted action), **research assistant**, 1996-1998
20. Post-harvest enhancing the quality and added value of raisins, (PENED P-T2072 GGET), **research assistant**, 1997-1999
21. Post-harvest measures enhancing the quality and added value of raisins on the purpose of increasing the competitiveness of the product, total budget(in euros around 300000€), **research assistant**, 1993-1997

#### Collaborations with third parties

22. Sensory analysis of different types of biscuits (Papadopoulos SA in the frame of an innovation event - General Secretariat for Research and Technology), GR, **scientific supervisor**: Dr. I. Mandala, 2008
23. Tensile strength in medicinal stickers. Validation based on standard values Cooperation with the company Lavipharm, **research assistant**, 1999
24. Quality assessment of cakes (colour, texture, density, sensory analysis) produced with different margarines and cakes with low fat content, **research assistant**, Cooperation with the company ΕΛΑΪΣ, GR, 1998

25. Optical/mechanical properties and defects of food products - snacks bake-rolls. Cooperation with Chipita SA, GR, **research assistant**, 1998
26. Comparative quality assessment of toasted bread (colour, porosity, texture). Papadopoulos SA, GR, **research assistant**, 1998