

Curriculum vitae Summary

Críspulo Gallegos

February 2014

BIOGRAPHY

Name: Crispulo GALLEGOS

Date of birth: 23-07-1955

Place of birth: Seville (Spain)

Nationality: Spanish

Professional Address: Fresenius Kabi Deutschland GmbH

Daimlerstrasse 22

61352 Bad Homburg

Germany

Phone: +49 6172 686 4203

Fax: +49 6172 686 7889

e-mail: cgallego@uhu.es

e-mail: crispulo.gallegos-montes@fresenius-kabi.com

Academic degree:

PhD (University of Seville, May 1982)

Academic activity:

Professor of Chemical Engineering and Chair (University of Huelva, 1997-2014). Leave of absence for 5 years

Professor of Chemical Engineering (University of Seville, 1985-1997)

BBVA Professor of Chemical Engineering (University of Cambridge, Department of Chemical Engineering, 1998)

Visiting Professor (Department de Genie Chimique, Université Laval, Québec, Canada, 1989)

Research activity:

Topic of interest: Complex Fluids Engineering

Researcher in more than 95 research projects sponsored by the administration or the industry. Author of more than 250 papers in scientific journals and books, more than 250 contributions to international and national Conferences (many of them as invited lecturer), and co-inventor in 15 patents. Director of 15 PhD Thesis on Complex Fluids Engineering.

Industrial activity:

Vice-President & Head of Innovation Centre Complex Formulations. Pharmaceuticals Division. Fresenius Kabi Deutschland GmbH (May 2011-continues).

Professional achievements and awards:

Academician of the European Academy of Sciences (2011).

Academician of the Russian Academy of Engineering (2012)

Vice-rector for Research Affairs (University of Huelva, 2000-2003).

Director of the Chemical Engineering Department of the University of Huelva (1997-2000).

Director of the R&D Centre on Food Technology of the University of Huelva. CIDERTA (2004).

Director of the "Complex Fluid Engineering Laboratory". Universities of Seville and Huelva (1991-2011)

Scientific Coordinator of the Food Technology Area of the National Agency for Evaluation and Prospective of the Spanish Ministry for Science and Technology (2001-2004).

President of the Spanish Group of Rheology (1993-2006).

President of the European Society of Rheology (2009-2013).

Honorary Secretary of the European Society of Rheology (2006-2009).

Member of the Executive Committee of the European Society of Rheology (2000-2004).

Chairman of the "Fourth European Rheology Conference" (1994).

Co-Chairman of the "16th International Conference on Rheology" (Lisbon, 2012).

Director of the "Eighth European School on Rheology" (2002).

Screening Editor of the journal "Chemical Engineering Research & Design"

Associate Editor of the journal "Mechanics of Time-Dependent Materials"

Member of the Editorial Board of the journals "Rheologica Acta", "Applied Rheology", and "Grasas y Aceites".

Invited "Associate Member" of the Institute of non-Newtonian Fluid Mechanics (U.K., 2006-continues).

Spanish Coordinator of EURHEO-European Master in Engineering Rheology (2008-2011)

Director of the Official Master "Product Formulation and Technology" (Spanish Government's Quality Award, 2007-2011).

Editor of the book "Progress and Trends in Rheology, IV" Steinkopff Verlag, Darmstadt (Germany). 1994, 720 pages (ISBN: 3-7985-1005-9).

Editor of the book "Rheology" in "Encyclopedia of Life Support Systems". UNESCO (2011).

AIQB award to "Excellence in Research" (2004).

LIST OF PUBLICATIONS (1991-2014)

- C. Gallegos; M. Berjano. "Esteres de sacarosa: obtención, propiedades y aplicaciones en la industria alimentaria". *Alimentación: Equipos y Tecnología* 10 (3), 153-159 (1991).
- J. Muñoz; C. Gallegos; V. Flores. "Structure and rheology in surfactant systems". *Tenside Surf. Det.* 28, 204-207 (1991).
- C. Gallegos; M. Nieto; C. Nieto; J. Muñoz. "Influence of surfactant concentration on the time-dependent rheological behaviour of the lamellar liquid crystal". *Prog. Colloid Polym. Sci.* 84, 236-240 (1991).
- A.F. Guerrero; J.M. Rodríguez Patino; V. Flores; C. Gallegos. "Rheological properties of slurry detergents: influence of temperature and concentration". *Chem. Biochem. Eng. Q.* 5, 125-133 (1991).
- M. Berjano; J. Muñoz; A. Guerrero; V. Flores; C. Gallegos. "Estudio comparativo de viscosidades obtenidas por ensayos de cizalla dinámica y estacionaria en una mayonesa comercial". *Rev. Agroquím. Tecnol. Aliment.* 31, 400-410 (1991).
- M. Berjano; C. Gallegos. "Comportamiento reológico dinámico de mayonesas comerciales: influencia de la temperatura y del contenido en aceite". *Grasas y Aceites* 42, 376-378 (1991).
- C. Gallegos; M. Berjano; L. Choplin. "Linear viscoelastic behavior of commercial and model mayonnaise". *J. Rheol.* 36, 465-478 (1992).
- C. Gallegos; M. Berjano; A. Guerrero; J. Muñoz; V. Flores. "Transient flow of mayonnaise described by a nonlinear viscoelasticity model". *J. Texture Studies* 23, 153-168 (1992).
- C. Calahorra; J. Muñoz; M. Berjano; A. Guerrero; C. Gallegos. "Flow behavior of sucrose stearate/water systems". *J. Am. Oil Chem. Soc.* 69, 660-666 (1992).
- M. Rodríguez; J. Muñoz; C. Gallegos. "Flujo transitorio de cristales líquidos laminares en sistemas binarios alcohol polietoxilado/agua". *Afinidad* 49, 252-256 (1992).
- J.M. Rodríguez; A. Guerrero; C. Gallegos. "Rheokinetic analysis of the hydration of pentasodium triphosphate in a detergent slurry". *J. Am. Oil Chem. Soc.* 70, 91-96 (1993).
- M. Berjano; A. Guerrero; J. Muñoz; C. Gallegos. "Temperature dependence of viscosity for sucrose laurate/water micellar systems". *Colloid Polym. Sci.* 271, 600-606 (1993).
- J.M. Franco; M. Berjano; J. Muñoz; A. Guerrero; C. Gallegos "Estabilidad de emulsiones alimentarias de bajo contenido en aceite". *EFCE Publication Series* 101 (3), 239-246 (1993).
- P. Partal; A. Guerrero; M. Berjano; J. Muñoz; C. Gallegos. "Comportamiento reológico de emulsiones aceite en agua estabilizadas con palmitato de sacarosa". *EFCE Publication Series* 101 (3), 247-254 (1993).
- M.C. Alfaro; J. Muñoz; A. Guerrero; M. Berjano; C. Gallegos. "Comportamiento reológico de emulsiones aceite en agua que contienen un estearato de sacarosa con un alto grado de esterificación". *EFCE Publication Series* 101 (3), 255-262 (1993).
- M. Berjano; J. Muñoz; A. Guerrero; V. Flores; C. Gallegos. "Viscoelasticidad no lineal en mayonesas comerciales". *EFCE Publication Series* 101 (3), 263-270 (1993).

J.M. Madiedo; M. Berjano; A. Guerrero; J. Muñoz; C. Gallegos. "Influences of surfactant concentration and temperature on the flow behaviour of sucrose oleate aqueous systems". *Colloids Surf.* 82, 59-69 (1994).

J.M. Franco; J.L. Algeciras; J.E. Trujillo; V. Flores; C. Gallegos. "Influencia del procesado en la estabilidad de emulsiones alimentarias aceite en agua de bajo contenido en aceite". *Alimentación, equipos y tecnología*, 13 (3), 61-66 (1994).

C. Gallegos. "Relación entre estructura y comportamiento reológico de tensioactivos en disolución acuosa". *Propiedades, caracterización y aplicaciones de los sistemas coloidales*, E. Rodenas (Ed.) Servicio Publicaciones Universidad Alcalá, 99-112 (1994).

J.M. Madiedo; M. Berjano; A. Guerrero; J. Muñoz; C. Gallegos. "Superposición tiempo-temperatura de curvas de flujo para sistemas acuosos de ésteres de sacarosa". *Propiedades, caracterización y aplicaciones de los sistemas coloidales*, E. Rodenas (Ed.) Servicio Publicaciones Universidad Alcalá, 384-386 (1994).

A. Guerrero; P. Partal; M. Berjano; V. Flores; C. Gallegos. "Viscoelastic behaviour O/W emulsions stabilized by sucrose palmitate". *Progress and Trends in Rheology IV*, C. Gallegos (Ed.) Steinkopff, Darmstadt, 233-235 (1994).

J.M. Madiedo; J. Muñoz; M. Berjano; C. Gallegos. "Influence of the HLB on the particule size and linear viscoelasticity of emulsions containing sucrose stearate blends". *Progress and Trends in Rheology IV*, C. Gallegos (Ed.) Steinkopff, Darmstadt, 242-244 (1994).

C. Gallegos; J.M. Franco; A. Guerrero; J. Muñoz; M. Berjano. "Influence of processing on the rheology of food emulsions". *Progress and Trends in Rheology IV*, C. Gallegos (Ed.) Steinkopff, Darmstadt, 281-283 (1994).

P. Partal; A.F. Guerrero; M. Berjano; J. Muñoz; C. Gallegos. "Flow behaviour and stability of O/W emulsions stabilized by a sucrose palmitate". *J. Texture Studies*, 25, 331-348 (1994).

C. Gallegos; J. Muñoz; A. Guerrero; M. Berjano. "Rheology of sucrose ester aqueous systems". *Structure and Flow in Surfactant Solutions*, C. Herb y R.K. Prud'homme (Eds.), ACS Symposium Series 578, American Chemical Society, Washington DC 217-228 (1994).

C. Gallegos; J.M. Franco; J. Muñoz; A. Guerrero; M. Berjano. "Estabilización de emulsiones alimentarias aceite en agua, de bajo contenido en aceite, con ésteres de sacarosa de alto HLB". *Innovación industrial y tecnológica*. J. Domínguez Abascal y J.M. Vega Piqueres (eds.) Servicio de Publicaciones de la Universidad de Sevilla, 35-50 (1994).

J.M. Franco; J. Muñoz; C. Gallegos. "Transient and steady flow of a lamellar liquid crystalline surfactant/water system". *Langmuir*, 11, 669-673 (1995).

M.C. Alfaro; J. Muñoz; A. Guerrero; M. Berjano; C. Gallegos. "Diagrama de fases y comportamiento reológico del sistema nonifenol polietoxilado eter/tolueno/agua". *Jorn. Com. Esp. Deterg.*, 26, 227-241 (1995).

J.M. Madiedo; J.M. Barea; A. Guerrero; J. Muñoz; C. Gallegos. "Comportamiento reológico de disoluciones que contienen laurato de sacarosa y goma xantana". *Jorn. Com. Esp. Deterg.*, 26, 243-257 (1995).

J.M. Franco; M. Berjano; A. Guerrero; J. Muñoz; C. Gallegos. "Flow behaviour and stability of light mayonnaise containing a mixture of egg yolk and sucrose stearate as emulsifiers". *Food Hydrocolloids* 9, 111-121 (1995).

- J.M. Franco; A. Guerrero; C. Gallegos. "Influencia de las concentraciones de aceite y emulsionante en las propiedades reológicas de emulsiones aceite en agua del tipo salsa fina". *Grasas y Aceites* 46, 108-114 (1995).
- C. Gallegos; J.M. Franco. "Linear and non-linear viscoelasticity of food emulsions containing a mixture of two emulsifiers". *Les Cahiers de Rhéologie*, 14, 107-116 (1995).
- J.M. Franco; A. Guerrero; C. Gallegos. "Rheology and processing of salad dressing emulsions". *Rheol. Acta*, 34, 513-524 (1995).
- J.M. Franco; M. Berjano; C. Gallegos. "Aplicación de un modelo viscoelástico no lineal para describir el flujo transitorio de emulsiones alimentarias del tipo salsa fina". *Reología y Textura de Productos Alimentarios de Interés Industrial*. C. Gallegos, A. Guerrero y J. Muñoz (Eds.). Grupo Español de Reología (RSEQ), 99-110 (1995).
- M.C. Gordillo; M.C. Sánchez; A. Guerrero, C. Gallegos. "Propiedades de flujo y distribución de tamaño de gotas en emulsiones o/w que contienen estearato de sacarosa de HLB 7". *Reología y Textura de Productos Alimentarios de Interés Industrial*. C. Gallegos, A. Guerrero y J. Muñoz (Eds.). Grupo Español de Reología (RSEQ), 111-122 (1995).
- J.M. Madiedo; J. Muñoz; C. Gallegos. "Influencia del HLB en el comportamiento reológico de mezclas acuosas de sucroésteres". *Reología y Textura de Productos Alimentarios de Interés Industrial*. C. Gallegos, A. Guerrero y J. Muñoz (Eds.). Grupo Español de Reología (RSEQ), 123-133 (1995).
- P. Partal; A. Guerrero; M. Berjano; C. Gallegos. "Reología de emulsiones o/w estabilizadas con un éster de sacarosa sometidas a diferentes condiciones de cizalla". *Reología y Textura de Productos Alimentarios de Interés Industrial*. C. Gallegos, A. Guerrero y J. Muñoz (Eds.). Grupo Español de Reología (RSEQ), 135-145 (1995).
- C. Gallegos; J.M. Franco; R. Steinbrüggen. "Rheology of lubricating greases". *Eurogrease* Sept-October, 2-13 (1995).
- J.M. Franco; J.E. Trujillo; J.L. Algeciras; C. Gallegos. "Estabilización de emulsiones alimentarias aceite en agua por modificación del contenido en emulsionante y estabilizante". *Alimentación, equipos y tecnología*, 15 (1), 103-109 (1996).
- F. Córdoba; J. Muñoz; C. Gallegos. "Viscoelasticidad lineal de la fase líquido-cristalina hexagonal de un sistema tensioactivo no iónico/hidrocarburo/agua". *Afinidad* 53, 255-261 (1996).
- A. Guerrero; P. Partal; M. Berjano; C. Gallegos. "Linear viscoelasticity of o/w sucrose palmitate emulsions". *Progr. Colloid Polym. Sci.*, 100, 246-251 (1996).
- J.M. Madiedo; J. Muñoz; C. Gallegos. "Calculation of relaxation and retardation spectra using the Tikhonov regularization method: application to emulsions". *Rheology and Fluid Mechanics of Nonlinear Materials*, AMD-Vol. 217. D.A. Siginer y S.G. Advani (Eds.). ASME, 151-159 (1996).
- C. Gallegos; M.C. Sánchez; A. Guerrero; J.M. Franco. "Effect of process parameters on the rheological properties of o/w emulsions". *Rheology and Fluid Mechanics of Nonlinear Materials*, AMD-Vol. 217. D.A. Siginer y S.G. Advani (Eds.). ASME, 177-183 (1996).
- F. Martínez; P. Partal; B. Conde; A. Barrón; C. Gallegos. "Pavimentos de ligantes sintéticos coloreables. Estudio de sus características mecánicas". *Ingeniería Química* 28 (329), 59-65 (1996).

- F. Cordobés; J. Muñoz; C. Gallegos. "Linear viscoelasticity of the direct hexagonal liquid crystalline phase for a heptane/nonionic surfactant/water system". *J. Colloid Interface Sci.*, 187, 401-417 (1997).
- J.M. Franco; M. Berjano; C. Gallegos. Linear viscoelasticity of salad dressing emulsions. *J. Agric. Food Chem.*, 45, 713-719 (1997).
- J.M. Madiedo; C. Gallegos. "Rheological characterisation of oil-in-water emulsions by means of relaxation and retardation spectra". *Recent Res. Devel. in Oil Chemistry*, 1, 79-90 (1997).
- P. Partal; A. Guerrero; M. Berjano; C. Gallegos. "Influence of concentration and temperature on the flow behavior of o/w emulsions stabilized by a sucrose palmitate". *J. Am. Oil Chem. Soc.*, 74, 1203-1212 (1997).
- J.M. Madiedo; C. Gallegos. "Rheological characterization of oil-in-water food emulsions by means of relaxation and retardation spectra". *Applied Rheol.*, 7, 161-167 (1997).
- J.M. Madiedo; C. Gallegos. "Use of the Tikhonov regularization method for the linear viscoelastic characterization of emulsifying systems". *CIT-Información Tecnológica*, 8, 333-340 (1997).
- C. Gallegos; J.M. Madiedo; J. Muñoz. "Influencia del balance hidrófilo/lipófilo en el comportamiento reológico de mezclas acuosas de sucroésteres". *Afinidad* 54, 200-206 (1997).
- R. Montero; J.M. Franco; L. Muntada; C. Gallegos. "Caracterización reológica de grasas lubricantes". *Ingeniería Química*, 341, 137-143 (1997).
- A. Guerrero; M.C. Sánchez; C. Gallegos; J.M. Franco; P. Partal. "Interrelación estabilidad-reología-procesado en emulsiones". *Coloides e Interfases*. E. Ródenas y S. Vera (Eds.). Servicio Publicaciones Universidad de Alcalá, 181- 188 (1997).
- J.M. Madiedo; J. Muñoz; C. Gallegos. "Cálculo de espectros de relajación y retardación de emulsiones mediante técnicas de regularización". *Coloides e Interfases*. E. Ródenas y S. Vera (Eds.). Servicio Publicaciones Universidad de Alcalá, 193- 198 (1997).
- M.C. Sánchez; M. Berjano; C. Gallegos. "Viscoelasticidad lineal de emulsiones aceite-en-agua estabilizadas con un alcohol polietoxilado". *Coloides e Interfases*. E. Ródenas y S. Vera (Eds.). Servicio Publicaciones Universidad de Alcalá, 199-204 (1997).
- F. Cordobés; J. Muñoz; C. Gallegos. "Espectros de relajación de fases líquido-cristalinas hexagonales". *Coloides e Interfases*. E. Ródenas y S. Vera (Eds.). Servicio Publicaciones Universidad de Alcalá, 219-225 (1997).
- J.M. Madiedo; C. Bower; C. Gallegos; M.R. Mackley. "Reología de emulsiones estabilizadas por biopolímeros". *Grasas Aceites*, 48, 405-410 (1997).
- P. Partal; A. Guerrero; M. Berjano; C. Gallegos. "Comportamiento reológico no estacionario de emulsiones aceite en agua estabilizadas con un palmitato de sacarosa". *Grasas Aceites*, 48, 425-436 (1997).
- J.M. Franco; C. Gallegos; H.A. Barnes. "On slip effects in steady-state flow measurements on o/w food emulsions". *J. Food Eng.*, 36, 89-102 (1998).
- A. Raymundo; J.M. Franco; C. Gallegos; J. Empis; I. Sousa. "Effect of thermal denaturation of lupin protein on its emulsifying properties". *Nahrung* 42, 220-224 (1998).

- J.M. Franco; A. Raymundo; I. Sousa; C. Gallegos. "Influence of processing variables on the rheological and textural properties of lupin protein-stabilized emulsions". *J. Agric. Food Chem.*, 46, 3109-3115 (1998).
- A. Guerrero; M.C. Sánchez; C. Gallegos; J.M. Franco; P. Partal. "Influencia de la composición y del procesado sobre la reología de emulsiones". *Afinidad*, 55, 259-266 (1998).
- M.C. Sánchez; M. Berjano; A. Guerrero; E. Brito; C. Gallegos. "Evolution of the microstructure and rheology of o/w emulsions during the emulsification process". *Can. J. Chem. Eng.*, 76, 479-485 (1998).
- J.M. Madiedo; C. Gallegos. "Rheology and microstructure of food emulsions". *Les Cahiers de Rhéologie*, 16, 93-98 (1998).
- I. Sousa; A. Raymundo; J. Empis; J.M. Franco; C. Gallegos. "Rheology and texture of lupin protein-stabilized emulsions. A statistical approach". *Les Cahiers de Rhéologie*, 16, 112-117 (1998).
- J.M. Madiedo; C. Gallegos. "Rheological characterisation of complex fluids by means of relaxation and retardation spectra". *Les Cahiers de Rhéologie*, 16, 411-418 (1998).
- F. Martínez-Boza; P. Partal; J. Navarro; B. Conde; C. Gallegos. "Propiedades viscoelásticas de ligantes sintéticos coloreables". *Les Cahiers de Rhéologie*, 16, 455-461 (1998).
- F. Cordobés; C. Gallegos. "Flujo estacionario de fases líquido-cristalinas laminares". *Les Cahiers de Rhéologie*, 16, 596-601 (1998).
- C. Gallegos; J.M. Madiedo; M.R. Mackley. "Rheology and microstructure of oil-in-water emulsions". *Progress and Trends in Rheology V*, I. Emri; R. Cvelbar (eds.) Steinkopff, 13-16 (1998).
- A. Guerrero; P. Partal; C. Gallegos. "Linear viscoelastic properties of sucrose ester-stabilized oil-in-water emulsions". *J. Rheol.*, 42, 1375-1388 (1998).
- A. Guerrero; P. Partal; M. Berjano; C. Gallegos. "Viscous properties of concentrated o/w sucrose palmitate emulsions stored at low temperature". *Anales de Química. International Edition*, 94, 214-218 (1998).
- F. Cordobés; E. Brito; C. Gallegos. "Effect of rheological properties on power input and effective shear rates when mixing with different impellers". *Anales de Química. International Edition*, 94, 274-278 (1998).
- P. Partal; F. Martínez-Boza; B. Conde; C. Gallegos. "Rheological characterisation of synthetic binders and unmodified bitumens". *Fuel* 78, 1-10 (1999).
- C. Bower; C. Gallegos; M.R. Mackley; J.M. Madiedo. "The rheological and microstructural characterisation of the non-linear flow behaviour of concentrated oil-in-water emulsions". *Rheol. Acta* 38, 145-159 (1999).
- C. Gallegos; J.M. Franco. "Rheology of Food Emulsions". In: *Advances in the Flow and Rheology of Non-Newtonian Fluids. Part A*. D. Siginer, D. De Kee, R.P. Chhabra (eds.), Elsevier, 87-118 (1999).
- P. Partal; A. Guerrero; M. Berjano; C. Gallegos. "Transient flow of o/w sucrose palmitate emulsions". *J. Food Eng.* 41, 33-41 (1999).
- A. Raymundo; J.M. Franco; P. Partal; I. Sousa; C. Gallegos. "Effect of the lupin protein/surfactant ratio on linear viscoelastic properties of oil-in-water emulsions". *J. Surfactant Deterg.* 2, 545-551 (1999).

- C. Gallegos; J.M. Franco. "Rheology of food, cosmetics and pharmaceuticals". *Current Opinion in Colloid and Interface Science* 4, 288-293 (1999).
- F. Martínez-Boza; P. Partal; B. Conde; C. Gallegos. "Propiedades reológicas de betunes y ligantes sintéticos coloreables". *Ingeniería Química* 31, 133-139 (1999).
- F. Martínez-Boza; P. Partal; B. Conde; C. Gallegos. "Influence of temperature and composition on the linear viscoelastic properties of synthetic binders". *Energy & Fuels* 14, 131-137 (2000).
- J.M. Madiedo; J.M. Franco; C. Valencia; C. Gallegos. "Modelling of the non-linear rheological behaviour of a lubricating grease using a factorable non-linear constitutive equation". *J. Tribol.* 122, 590-596 (2000).
- J.E. Moros; J.M. Franco; C. Gallegos. "Viscoelasticidad lineal de emulsiones aceite en agua estabilizadas con yema de huevo deshidratada". *Alimentación, Equipos y Tecnología* 19 (5), 81-87 (2000).
- J.M. Franco; P. Partal; D. Ruiz; B. Conde; C. Gallegos. "Influence of pH and protein thermal treatment on the rheology of pea protein-stabilized emulsions". *J. Am. Oil Chem. Soc.* 77, 975-983 (2000).
- F. Martínez-Boza; P. Partal; J. Navarro; C. Gallegos. "Microestructura y propiedades reológicas de ligantes sintéticos". *Carreteras* 108, 59-66 (2000).
- A. Guerrero; P. Partal; C. Gallegos. "Linear and non-linear viscoelasticity of low-in-cholesterol mayonnaise". *Food Sci. Technol. Intern.* 6, 165-172 (2000).
- F. Cordobés; C. Gallegos. "Viscoelasticidad lineal de la fase líquido-cristalina laminar de un sistema tensioactivo no iónico/hidrocarburo/agua". *Grasas Aceites* 51, 254-260 (2000).
- M.C. Sánchez; M. Berjano; A. Guerrero; C. Gallegos. "Evolución de las propiedades reológicas de emulsiones aceite vegetal en agua durante el proceso de emulsificación y almacenamiento". *Grasas Aceites* 51, 230-236 (2000).
- F.J. Navarro; F. Martínez-Boza; P. Partal; C. Gallegos. "Efecto del procesado sobre el comportamiento reológico de sistemas aceite de petróleo/copolímero SBS". *Ingeniería Química* 32, 107-112 (2000).
- F. Martínez-Boza; P. Partal; F.J. Navarro; C. Gallegos. "Rhéologie et microstructure des liants bitumineux". *Les Cahiers de Rhéologie* 17, 427-435 (2000).
- F. Martínez-Boza; P. Partal; F.J. Navarro; C. Gallegos. "Rhéologie des mélanges SBS et huile de pétrole". *Les Cahiers de Rhéologie* 17, 279-286 (2000).
- M.C. Sánchez; M. Berjano; A. Guerrero; C. Gallegos. "Evolución de la microestructura y reología de emulsiones o/w durante el proceso de emulsificación". *Coloides e Interfases. Estado Líquido*. F.J. de las Nieves y A. Fernández Barbero (Eds.). Servicio Publicaciones Universidad de Almería, 433-440 (2000).
- F. Cordobés; C. Gallegos. "Flujo estacionario de fases líquido-cristalinas laminares". *Coloides e Interfases. Estado Líquido*. F.J. de las Nieves y A. Fernández Barbero (Eds.). Servicio Publicaciones Universidad de Almería, 475-483 (2000).
- F. Martínez-Boza; P. Partal; F.J. Navarro; C. Gallegos. "Rheology and microstructure of asphalt binders". *Rheol. Acta* 40, 135-141 (2001).

- S. Manca; R. Lapasin; P. Partal; C. Gallegos. "Influence of surfactant addition on the rheological properties of aqueous welan matrices". *Rheol. Acta* 40, 128-134 (2001).
- F. Martínez-Boza; P. Partal; B. Conde; C. Gallegos. "Steady-state flow behaviour of synthetic binders". *Fuel* 80, 357-365 (2001).
- F.J. Navarro; F. Martínez-Boza; P. Partal; C. Gallegos; M.E. Muñoz; J. Areizaga; A. Santamaría. "Effect of processing variables on the linear viscoelastic properties of SBS-oil blends". *Polym. Eng. Sci.* 2216-2225 (2001).
- M.C. Sánchez; M. Berjano; A. Guerrero; C. Gallegos. "Emulsification rheokinetics of nonionic surfactant-stabilized oil-in-water emulsions". *Langmuir* 18, 5410-5416 (2001).
- F. Martínez-Boza; C. Gallegos. "Caracterización reológica de betunes modificados". *Carreteras* 113, 45-53 (2001).
- A. Raymundo; J. Empis; I. Sousa; C. Gallegos; J.M. Franco. "Influencia de la relación proteína de altramuz/tensioactivo en las propiedades de flujo y texturales de emulsiones aceite en agua". *Grasas Aceites* 52, 235-240 (2001).
- M.C. Sánchez M. Berjano; A. Guerrero; C. Gallegos. "Evolución de la cinética de emulsificación y de las propiedades reológicas de emulsiones aceite vegetal en agua preparadas con dos tipos de agitadores". *Grasas Aceites* 52, 222-228 (2001).
- M.C. Sánchez; C. Valencia; J.M. Franco; C. Gallegos. "Wall-slip phenomena in oil-in-water emulsions: effect of some structural parameters". *J. Colloid Interface Sci.* 241, 226-232 (2001).
- J.E. Moros; F. Cordobés; C. Gallegos; J.M. Franco. "Linear viscoelasticity of concentrated polyethylene glycol tert-octylphenyl ether solutions". *J. Dispersion Sci. Technol.* 22, 409-420 (2001).
- A.Pérez; F.J. Navarro; F.J. Martínez-Boza; C. Gallegos. "Betunes modificados con polietileno reciclado. Propiedades reológicas". *Ingeniería Química* 33, 137-140 (2001).
- J.E. Moros; J.M. Franco; C. Gallegos. "Rheology of spray-dried egg yolk-stabilized emulsions". *Intern. J. Food Sci. Technol.* 37, 297-307 (2002).
- C. Gallegos; J.M. Franco; J.M. Madiedo; A. Raymundo; I. Sousa. "Non-linear viscoelasticity modeling of vegetable protein-stabilized emulsions". *Engineering and Food for the 21st Century*. CRC Press. J. Welti-Chanes, G.V. Barbosa-Cánovas y J.M. Aguilera (eds.), 415-430 (2002).
- C. Valencia; M.C. Sánchez; A. Ciruelos; A. de Latorre; J.M. Franco; C. Gallegos. "Linear viscoelasticity of tomato sauce products: influence of previous tomato paste processing". *Eur. Food Res. Technol.* 214, 394-399 (2002).
- J.E. Moros; J.M. Franco; C. Gallegos. "Effect of cholesterol content on the rheological properties of cholesterol-reduced egg yolk-stabilized mayonnaise". *J. Am. Oil Chem. Soc.* 79, 837-843 (2002).
- F. Cordobés; J.E. Moros; J.M. Franco; C. Gallegos. "Viscoelasticidad lineal de estructuras líquido-cristalinas de un sistema tensioactivo no iónico nonilfenol etoxilado/agua". *Grasas y Aceites* 53, 167-172 (2002).
- F.J. Navarro; P. Partal; F. Martínez-Boza; C. Valencia; C. Gallegos. "Rheological characteristics of ground tyre rubber-modified bitumens". *Chem. Eng. J.* 89, 53-61 (2002).

- A. Pérez-Lepe; F. Martínez-Boza; C. Gallegos. "Propiedades reológicas de betunes modificados con polietileno/EPDM". *Carreteras* 121, 29-35 (2002).
- M.C. Sánchez; C. Valencia; C. Gallegos; A. Ciruelos; A. de Latorre. "Influence of processing on the rheological properties of tomato paste". *J. Sci. Food Agric.* 82, 990-997 (2002).
- O. González; J.J. Peña; M.E. Muñoz; A. Santamaría; A. Pérez-Lepe; F. Martínez-Boza; C. Gallegos. "Rheological techniques as a tool to analyze polymer-bitumen interactions: bitumen modified with polyethylene and polyethylene-based blends". *Energy & Fuels* 16, 1256-1263 (2002).
- C. Valencia; M.C. Sánchez; A. Ciruelos; A. De Latorre; J.M. Madiedo; C. Gallegos. "Non-linear viscoelasticity modeling of tomato paste products". *Food Res. Intern.* 36, 911-919 (2003).
- J.E. Moros; F. Cordobés; J.M. Franco; C. Gallegos. "Enhancement of gel strength by application of thermal treatments in highly flocculated emulsions". *Food Hydrocolloids* 17, 199-206 (2003).
- M.C. Sánchez; C. Valencia; A. Ciruelos; A. De Latorre; C. Gallegos. "Rheological properties of tomato paste: influence of the addition of tomato slurry". *J. Food Sci.* 68, 551-554 (2003).
- I. Martínez, P. Partal, J. Muñoz, C. Gallegos. "Influence of thermal treatment on the flow of starch based-food emulsions". *European Food Research and Technology* 217, 17-22 (2003).
- M.A. Riscardo; J.M. Franco; C. Gallegos. "Influence of composition of emulsifier blends on the rheological properties of salad dressing type emulsions". *Food Sci. Technol. Intern.* 9, 53-63 (2003).
- A. Pérez-Lepe; F. Martínez-Boza; C. Gallegos; O. González; M.E. Muñoz; A. Santamaría. "Influence of the processing conditions on the rheological behaviour of polymer-modified bitumen". *Fuel* 82, 1339-1348 (2003).
- M.C. Sánchez; C. Valencia; A. Ciruelos; A. de Latorre; C. Gallegos. "Influence of previous tomato paste processing on the linear viscoelasticity of tomato ketchup". *Food Sci. Technol. Intern.* 10, 95-100 (2004).
- M.García-Morales; P. Partal; F.J. Navarro; F. Martínez-Boza; C. Gallegos; N. González; O. González; M.E. Muñoz. "Viscous properties and microstructure of recycled EVA modified bitumens". *Fuel* 83, 31-38 (2004).
- M.García-Morales; P. Partal; F.J. Navarro; F. Martínez-Boza; C. Gallegos. "Linear viscoelasticity of recycled EVA modified bitumens". *Energy and Fuels* 18, 357-364 (2004).
- C. Gallegos; J.M. Franco; P. Partal. "Rheology of food dispersions". *Rheology Reviews 2004. The British Society of Rheology. D.M. Binding y K. Walters (eds.)*, 19-65 (2004).
- J.A. Morales; J.M. Franco; C. Valencia; M.C. Sánchez; C. Gallegos. "Influence of some processing variables on the rheological properties of lubricating greases manufactured in a stirred tank". *J. Ind. Eng. Chem.* 10, 368-378 (2004).
- F.J. Navarro; P. Partal; F. Martínez-Boza; C. Gallegos. "Thermo-rheological behaviour and storage stability of ground tire rubber-modified bitumens". *Fuel* 83, 2041-2049 (2004).
- M. García-Morales; P. Partal; F.J. Navarro; F. Martínez-Boza; M.R. Mackley; C. Gallegos. "The rheology of recycled EVA/LDPE modified bitumen". *Rheol. Acta* 43, 482-490 (2004).

A. Jerez; P. Partal; I. Martínez; C. Gallegos; A. Guerrero. "Effect of processing on the rheological properties of wheat gluten biomaterials". Progress in rheology of biological and synthetic polymer systems. A.C. Diogo et al. (eds.), 129-135 (2004). IPB. Portugal.

M. García-Morales; P. Partal; F.J. Navarro; F.J. Martínez Boza; C. Gallegos. "Bitumen modification by waste polymers". Progress in rheology of biological and synthetic polymer systems. A.C. Diogo et al. (eds.), 363-369 (2004). IPB. Portugal.

A. Pérez-Lepe; F.J. Martínez Boza; P. Partal; C. Gallegos. "Influence of processing on the rheology and morphology of HDPE-modified bitumen". Progress in rheology of biological and synthetic polymer systems. A.C. Diogo et al. (eds.), 371-375 (2004). IPB. Portugal.

M.A. Delgado; J.M. Franco; P. Partal; C. Gallegos. "Pumping flow of lubricating greases". Progress in rheology of biological and synthetic polymer systems. A.C. Diogo et al. (eds.), 377-383 (2004). IPB. Portugal.

M.A. Delgado; J.M. Franco; C. Valencia; M.C. Sánchez; C. Gallegos. "Influence of composition and temperature on the rheology of lubricating greases". Progress in rheology of biological and synthetic polymer systems. A.C. Diogo et al. (eds.), 395-400 (2004). IPB. Portugal.

M.A. Delgado; J.M. Franco; P. Partal; C. Gallegos. "Experimental study of grease flow in pipelines: wall slip and air entrainments effects". Chem. Eng. Process. 44, 805-817 (2005).

M.A. Riscardo; J.E. Moros; J.M. Franco; C. Gallegos. "Rheological characterization of salad-dressing-type emulsions stabilized by egg yolk/sucrose distearate blends". Eur. Food Res. Technol. 220, 380-388 (2005).

F.J. Navarro; P. Partal; F. Martínez-Boza; C. Gallegos. "Effect of composition and processing on the linear viscoelasticity of synthetic binders". European Polymer Journal 41, 1429-1438 (2005).

J.M. Franco; M.A. Delgado; C. Valencia; M.C. Sánchez; C. Gallegos. "Mixing rheometry for studying the manufacture of lubricating greases". Chem. Eng. Sci. 60, 2409-2418 (2005).

C. Fuentes-Audén; F. Martínez-Boza; F.J. Navarro; P. Partal; C. Gallegos. "Viscous flow properties and phase behaviour of oil-resin blends". Fluid Phase Equilibria 237, 125-130 (2005).

A. Pérez-Lepe; F. Martínez-Boza; C. Gallegos. "Influence of polymer concentration on the microstructure and rheological properties of high-density polyethylene (HDPE)-modified bitumen". Energy&Fuels 19, 1148-1152 (2005).

A. Jerez; P. Partal; I. Martínez; C. Gallegos; A. Guerrero. "Rheology and processing of gluten based bioplastics". Biochem. Eng. J. 26, 131-138 (2005).

F.J. Navarro; P. Partal; F. Martínez-Boza; C. Gallegos. "Influence of crumb rubber concentration on the rheological behaviour of a crumb rubber modified bitumen". Energy&Fuels 19, 1984-1990 (2005).

D. Bais; A. Trevisan; R. Lapasin; P. Partal; C. Gallegos. "Rheological characterization of polysaccharide-surfactant matrices for cosmetics o/w emulsions". J. Colloid Interface Sci. 290, 546-556 (2005).

F. Cordobés; J.M. Franco; C. Gallegos. "Rheology of the lamellar liquid-crystalline phase in polyethoxylated alcohol/water/heptane systems". Grasas y Aceites 56, 96-105 (2005).

- M.A. Delgado; J.M. Franco; C. Gallegos; F. Urquiola; R. Urchegui. "Bombeo de grasas lubricantes a través de tuberías". *Ingeniería Química* 422, 150-165 (2005).
- A. Pérez-Lepe; F.J. Martínez-Boza; C. Gallegos. "Comportamiento de ligantes asfálticos modificados con polímeros". *Ingeniería Química* 429, 112-116 (2005).
- A. Pérez-Lepe; F.J. Martínez-Boza; C. Gallegos. "Reología y microestructura de betunes modificados con polietileno". *Carreteras* 142, 55-63 (2005).
- M.A. Delgado; J.M. Franco; C. Valencia; M.C. Sánchez; C. Gallegos. "Microestructura, reología y procesado de grasas lubricantes". *Coloides e Interfases*. M.M. Velázquez y M.D. Merchán (eds.). Ediciones Universidad de Salamanca, 335-341 (2005). Spain.
- M.A. Delgado; M.C. Sánchez; C. Valencia; J.M. Franco; C. Gallegos. "Relationship among microstructure, rheology and processing of a lithium lubricating grease". *Chem. Eng. Res. Des.* 83, 1085-1092 (2005).
- M.J. Martín Alfonso; F. Martínez-Boza; P. Partal; C. Gallegos. "Influence of pressure and temperature on the flow behaviour of heavy fuel oils". *Rheol. Acta* 45, 357-365 (2006).
- M. García Morales; P. Partal; F.J. Navarro; F. Martínez-Boza; C. Gallegos. "Process rheokinetics and microstructure of recycled EVA/LDPE-modified bitumen". *Rheol. Acta* 45, 513-524 (2006).
- G. Moreno; C. Valencia; M.V. de Paz; J.M. Franco; C. Gallegos. "Use of reactive diisocyanate-terminated polymers as rheology modifiers of lubricating greases". *Ind. Eng. Chem. Res.* 45, 4001-4010 (2006).
- M.A. Delgado; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "Thermorheological behaviour of a lithium lubricating grease". *Tribology Letters* 23, 47-54 (2006).
- M.J. Ruiz Viera; M.A. Delgado; J.M. Franco; M.C. Sánchez; C. Gallegos. "On the drag reduction for the two-phase horizontal pipe flow of highly viscous non-Newtonian liquid/air mixtures: case of lubricating grease". *Int. J. Multiphase Flow* 32, 232-247 (2006).
- M.A. Delgado; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "Influence of soap concentration and oil viscosity on the rheology and microstructure of lubricating greases". *Ind. Eng. Chem. Res.* 45, 1902-1910 (2006).
- M.J. Ruiz-Viera; M.A. Delgado; J.M. Franco; C. Gallegos. "Evaluation of wall slip effects in the lubricating grease/air two-phase flow along pipelines". *J. Non-Newtonian Fluid Mech.* 139, 190-196 (2006).
- M.A. Delgado; J.M. Franco; C. Valencia; G. Moreno; C. Gallegos. "Processing and formulation of lithium lubricating greases". *Flow Dynamics*. M. Tokuyama y S. Maruyama (eds.). American Institute of Physics, 257-262 (2006).
- A. Pérez-Lepe; F.J. Martínez-Boza; P. Atané; C. Gallegos. "Destabilization mechanism of polyethylene-modified bitumen". *J. Applied Polym. Sci.* 100, 260-267 (2006).
- M. García-Morales; P. Partal; F.J. Navarro; C. Gallegos. "Effect of waste polymer addition on the rheology of modified bitumen". *Fuel* 85, 936-943 (2006).
- F.J. Navarro; P. Partal; F. Martínez-Boza; C. Gallegos; J.C.M. Bordado; A.C. Diogo. "Rheology and microstructure of MDI-PEG reactive prepolymer-modified bitumen". *Mech. Time-Depend. Mater.* 10, 347-359 (2006).

- M.J. Martín Alfonso; F. Martínez-Boza; F.J. Navarro; M. Fernández; C. Gallegos. "Pressure-temperature-viscosity relationship for heavy petroleum fractions". *Fuel* 86, 227-233 (2007).
- F.J. Navarro; P. Partal; M. García Morales; F. Martínez-Boza; C. Gallegos. "Bitumen modification with a low-molecular weight reactive isocyanate-terminated polymer". *Fuel* 86, 2291-2299 (2007).
- J.E. Martín-Alfonso; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "Development of new lubricating grease formulations using recycled LDPE as rheology modifier additive". *European Polym. J.* 43, 139-149 (2007).
- A. Jerez; P. Partal; I. Martínez; C. Gallegos; A. Guerrero. "Protein-based bioplastics: effect of thermo-mechanical processing". *Rheol. Acta* 46, 711-720 (2007).
- A. Jerez; P. Partal; I. Martínez; C. Gallegos; A. Guerrero. "Egg white-based bioplastics developed by thermomechanical processing". *J. Food Eng.* 82, 608-617 (2007).
- C. Fuentes-Audén; F. Martínez-Boza; F.J. Navarro; P. Partal; C. Gallegos. "Formulation of new synthetic binders: thermo-mechanical properties of recycled polymer/oil blends". *Polym. Testing* 26, 323-332 (2007).
- F.J. Navarro; P. Partal; F. Martínez-Boza; C. Gallegos. "Influence of processing conditions on the rheological behaviour of crumb tire rubber-modified bitumen". *J. Applied Polym. Sci.* 104, 1683-1691 (2007).
- M. García-Morales; P. Partal; F.J. Navarro; F.J. Martínez-Boza; C. Gallegos. "Processing, rheology, and storage stability of recycled EVA/LDPE modified bitumen". *Polym. Eng. Sci.* 47, 181-191 (2007).
- G. Moreno; C. Valencia; M.V. de Paz; J.M. Franco; C. Gallegos. "Rheology and microstructure of lithium lubricating greases modified with a reactive diisocyanate-terminated polymer: Influence of polymer addition protocol". *Chem. Eng. Process.* 47, 528-538 (2008).
- J.E. Martín-Alfonso; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "Recycled and virgin LDPE as rheology modifiers of lithium lubricating greases: a comparative study". *Polym. Eng. Sci.* 48, 1112-1119 (2008).
- G. Moreno; C. Valencia; J.M. Franco; C. Gallegos; A. Diogo; J.C.M. Bordado. "Influence of molecular weight and free NCO content on the rheological properties of lithium lubricating greases modified with NCO-terminated prepolymers". *Eur. Polym. J.* 44, 2262-2274 (2008).
- R. Sánchez; J.M. Franco; M.A. Delgado; C. Valencia; C. Gallegos. "Effect of thermo-mechanical processing on the rheology of oleogels potentially applicable as biodegradable lubricating greases". *Chem. Eng. Res. Des.* 86, 1073-1082 (2008).
- M.J. Martín-Alfonso; P. Partal; F.J. Navarro; M. García-Morales; C. Gallegos. "Use of a MDI-functionalized reactive polymer for the manufacture of modified bitumen with enhanced properties for roofing applications". *European Polym. J.* 44, 1451-1461 (2008).
- C. Fuentes-Audén; J.A. Sandoval; A. Jerez; F.J. Navarro; F. Martínez-Boza; P. Partal; C. Gallegos. "Evaluation of thermal and mechanical properties of recycled polyethylene modified bitumen". *Polym. Testing* 27, 1005-1012 (2008).
- M.J. Martín-Alfonso; P. Partal; F.J. Navarro; M. García-Morales; C. Gallegos. "Role of water in the development of new isocyanate-based bituminous products". *Ind. Eng. Chem. Res.* 47, 6933-6940 (2008).

- D.P. Gómez-Martínez; P. Partal; I. Martínez; C. Gallegos. "Rheological behaviour and physical properties of controlled-release gluten-based bioplastics". *Bioresource Technol.* 100, 1828-1832 (2009).
- M.A. Delgado; J.M. Franco; C. Valencia; E. Kuhn; C. Gallegos. "Transient shear flow of model lithium lubricating greases". *Mechanics of Time-Dependent Materials* 13, 63-80 (2009).
- C. Gallegos; P. Partal; J.M. Franco. "Droplet-size distribution and stability of lipid injectable emulsions" *Am. J. Health-Syst. Pharm.* 66, 162-166 (2009).
- L. Quinchia; M.A. Delgado; C. Valencia; J.M. Franco; C. Gallegos. "Viscosity modification of high-oleic sunflower oil with polymeric additives for the design of new biolubricant formulations". *Environmental Science & Technology* 43, 2060-2065 (2009).
- M.A. Delgado; J.M. Franco; C. Valencia; E. Kuhn; C. Gallegos. "Transient shear flow of model lithium lubricating greases". *Mechanics of Time-Dependent Materials* 13, 63-80 (2009).
- F.J. Navarro; P. Partal; M. García-Morales; M.J. Martín-Alfonso; C. Gallegos; J.C. Bordado; A. Diogo. "Bitumen modification with reactive and non-reactive (virgin and recycled) polymers: a comparative analysis". *J. Ind. Eng. Chem.* 15, 458-464 (2009).
- R. Sánchez; J.M. Franco; M.A. Delgado; C. Valencia; C. Gallegos. "Development of new lubricating grease formulations based on cellulosic derivatives and castor oil". *Green Chem.* 11, 686-693 (2009).
- V. Carrera; P. Partal; M. García-Morales; C. Gallegos; A. Páez. "Influence of bitumen colloidal nature on the design of isocyanate-based bituminous products with enhanced rheological properties". *Ind. Eng. Chem. Res.* 48, 8464-8470 (2009).
- J.E. Martín-Alfonso; G. Moreno; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "Influence of soap/polymer concentration ratio on the rheological properties of lithium lubricating greases modified with virgin LDPE". *J. Ind. Eng. Chem.* 15, 687-693 (2009).
- J.E. Martín-Alfonso; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "Rheological modification of lubricating greases with recycled polymers from different plastic waste". *Ind. Eng. Chem. Res.* 48, 4136-4144 (2009).
- G. Moreno; J.M. Franco; C. Valencia; C. Gallegos. "Rheology of lubricating greases modified with reactive NCO-terminated polymeric additives". *J. Applied Polym. Sci.* 118, 693-704 (2010).
- F.J. Navarro; P. Partal; F. Martínez-Boza; C. Gallegos. "Novel recycled polyethylene/ground tire rubber/bitumen blends for use in roofing applications: thermo-mechanical properties". *Polym. Testing* 29, 588-595 (2010).
- J. González-Gutiérrez; P. Partal; M. García-Morales; C. Gallegos. "Development of highly-transparent protein/starch-based bioplastics". *Bioresource Technol.* 101, 2007-2013 (2010).
- V. González; P. Partal; M. García-Morales; C. Gallegos; A. Pérez-Lepe. "Effect of processing on the rheological properties of poly-urethane/urea bituminous products". *Fuel Process. Technol.* 91, 1139-1145 (2010).
- V. González; F.J. Martínez-Boza; F.J. Navarro; C. Gallegos; A. Pérez-Lepe; A. Páez. "Thermomechanical properties of bitumen modified with crumb tire rubber and polymeric additives". *Fuel Process. Technol.* 91, 1033-1039 (2010).

- L.A. García-Zapateiro; M.A. Delgado; J.M. Franco; C. Valencia; M.V. Ruiz-Méndez; R. Garcés; C. Gallegos. "Oleins as a source of estolides for biolubricant applications". *Grasas y Aceites* 61, 171-174 (2010).
- V. Carrera; M. García-Morales; F.J. Navarro; P. Partal; C. Gallegos. "Bitumen chemical foaming for asphalt paving applications". *Ind. Eng. Chem. Res.* 101, 8538-8543 (2010).
- V. Carrera; M. García-Morales; P. Partal; C. Gallegos. "Novel bitumen/isocyanate-based reactive polymer formulations for the paving industry". *Rheol. Acta* 49, 563-572 (2010).
- D. Ruiz-Márquez; P. Partal; J.M. Franco; C. Gallegos. "Emulsiones alimentarias aceite-en-agua estabilizadas con proteínas de atún". *Grasas y Aceites* 61, 352-360 (2010).
- L. Quinchia; M.A. Delgado; C. Valencia; J.M. Franco; C. Gallegos. "Viscosity modification of different vegetable oils with EVA copolymer for lubricant applications". *Industrial Crops & Products* 32, 607-612 (2010).
- R. Sánchez; J.M. Franco; M.A. Delgado; C. Valencia; C. Gallegos. "Thermal and mechanical characterization of cellulosic derivatives-based oleogels potentially applicable as bio-lubricating greases: influence of ethyl cellulose molecular weight". *Carbohydr. Polym.* 83, 151-158 (2011).
- R. Sánchez; G.B. Stringari; J.M. Franco; C. Valencia; C. Gallegos. "Use of chitin, chitosan and acylated derivatives as thickener agents of vegetable oils for bio-lubricant applications". *Carbohydr. Polym.* 83, 151-158 (2011).
- J. González-Gutiérrez; P. Partal; M. García-Morales; C. Gallegos. "Effect of processing on the viscoelastic, tensile and optical properties of albumen/starch-based bioplastics". *Carbohydr. Polym.* 84, 308-315 (2011).
- L. Quinchia; C. Valencia; P. Partal; J.M. Franco; E. Brito; C. Gallegos. "Linear and non-linear viscoelasticity of puddings for nutritional management of dysphagia". *Food Hydrocolloids* 25, 586-593 (2011).
- M.C. Sánchez; J.M. Franco; C. Valencia; C. Gallegos; F. Urquiola; R. Urchegi. "Atomic force microscopy and thermo-rheological characterization of lubricating greases". *Tribol. Lett.* 41, 463-470 (2011).
- J.E. Martín-Alfonso; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "Evaluation of different polyolefins as rheology modifier additives in lubricating grease formulations". *Materials Chemistry & Physics* 128, 530-538 (2011).
- A. Cuadri; P. Partal; F.J. Navarro; M. García-Morales; C. Gallegos. "Influence of processing temperature on the modification route and rheological properties of thiourea dioxide-modified bitumen". *Energy & Fuels* 25, 4055-4062 (2011).
- F.R. Lupi; D. Gabriele; B. de Cindio; M.C. Sánchez; C. Gallegos. "A rheological analysis of structured water-in-olive oil emulsions". *J. Food Eng.* 107, 296-303 (2011).
- C. Gallegos; M. García-Morales. "Rheology of polymer-modified bitumens". In: "Polymer modified bitumen". T. McNally (ed.). WoodHead Publishing Limited. Oxford (UK). pp. 197-237 (2011).
- A. Cuadri; P. Partal; F.J. Navarro; M. García-Morales; C. Gallegos. "Bitumen chemical modification by thiourea dioxide". *Fuel* 90, 2294-2300 (2011).

- R. Sánchez; J.M. Franco; M.A. Delgado; C. Valencia; C. Gallegos. "Gel-like dispersions based on cellulosic derivatives and castor oil applicable as biodegradable lubricating grease formulations". *Chemical Engineering Transactions* 24, 499-504 (2011).
- J. Carbone; L. Quinchia; C. Valencia; P. Partal; J.M. Franco; E. Brito; C. Gallegos. "Influence of secondary homogenisation and final thermal treatment on the evolution of the rheological properties of model puddings for dysphagia nutritional support". *Chemical Engineering Transactions* 24, 1483-1488 (2011).
- M.A. Izquierdo; F.J. Navarro; F. Martínez-Boza; C. Gallegos. "Novel stable MDI isocyanate-based bituminous foams". *Fuel* 90, 681-688 (2011).
- R. Sánchez; J.M. Franco; M.A. Delgado; C. Valencia; C. Gallegos. "Rheological and mechanical properties of oleogels based on castor oil and cellulosic derivatives potentially applicable as lubricating greases: influence of cellulosic derivatives concentration ratio". *Journal of Industrial and Engineering Chemistry* 17, 705-711 (2011).
- R. Sánchez; J.M. Franco; M.A. Delgado; C. Valencia; C. Gallegos. "Rheology of oleogels based on sorbitan and glycerol monostearates and vegetable oils for lubricating applications". *Grasas y Aceites* 62, 328-336 (2011).
- F.J. Martínez-Boza; M.J. Martín-Alfonso; C. Gallegos; M. Fernández. "High-pressure behavior of intermediate fuel oils". *Energy & Fuels* 25, 5138-5144 (2011).
- L. Quinchia; M.A. Delgado; C. Valencia; J.M. Franco; C. Gallegos. "Natural and synthetic antioxidant additives for improving the performance of new biolubricant formulations". *J. Agric. Food Chem.* 59, 12917-12924 (2011).
- M. Shivokhin; M. García-Morales; P. Partal; A. Cuadri; C. Gallegos. "Rheological behavior of polymer-modified bituminous mastics: A comparative analysis between physical and chemical modification". *Construction & Building Materials* 27, 234-240 (2012).
- C. Fuentes-Audén; F. Martínez-Boza; F.J. Navarro; P. Partal; C. Gallegos. "Formulation of new synthetic binders: thermo-mechanical properties of resin/recycled polymer blends". *Polym. Eng. Sci.* 52, 242-249 (2012).
- E. Brito; N. Staudinger-Prevost; L. Quinchia; C. Valencia; P. Partal; J.M. Franco; C. Gallegos. "Design of a new spoon-thick consistency oral nutrition supplement using rheological similarity with a swallow barium test feed". *Appl. Rheol.* 22, 533651-533658 (2012).
- E. Brito; O. Ekberg; C. Gallegos. "Rheology aspects of swallowing and Dysphagia". In: *Dysphagia - Diagnosis and Treatment*. Olle Ekberg (ed.). Springer-Verlag, Berlin. pp. 493-506 (2012).
- C. Gallegos; C. Valencia; P. Partal; J.M. Franco; O. Maglio; M. Abrahamsson; E. Brito. "Droplet-size distribution and stability of commercial injectable lipid emulsions containing fish oil". *Am. J. Health-Syst. Pharm.* 69, 1332-1335 (2012).
- C. Gallegos, L. Quinchia, G. Ascanio, M. Salinas-Vázquez, E. Brito. "Rheology and Dysphagia: an overview". *Ann. Trans. Nordic Rheol. Soc.* 20, 3-10 (2012).
- V. González; F.J. Martínez-Boza; C. Gallegos; A. Pérez-Lepe; A. Páez. "A study into the processing of bitumen modified with tire crumb rubber and polymeric additives". *Fuel Process. Technol.* 95, 137-143 (2012).
- M.A. Izquierdo; F.J. Navarro; F. Martínez-Boza; C. Gallegos. "Bituminous polyurethane foams for building applications: influence of bitumen hardness". *Construction & Building Materials* 30, 706-713 (2012).

- L. Quinchia; M.A. Delgado; J.M. Franco; H.A. Spikes; C. Gallegos. "Low-temperature flow behaviour of vegetable oil-based lubricants". *Industrial Crops and Products* 37, 383-388 (2012).
- J.E. Martin-Alfonso; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "Influence of some processing variables on the rheological properties of lithium lubricating greases modified with recycled polymers". *International Journal of Materials & Product Technology* 43, 184-200 (2012).
- L.A. García-Zapateiro; J.M. Franco; C. Valencia; M.A. Delgado; C. Gallegos. "Viscous, thermal and tribological characterization of oleic and ricinoleic acids-derived estolides and their blends with vegetable oils". *Journal of Industrial and Engineering Chemistry* 19, 1289-1298 (2013).
- D.P. Gómez-Martínez; P. Partal; I. Martínez; C. Gallegos. "Gluten-based bioplastics with modified controlled-release and hydrophilic properties". *Industrial Crops and Products* 43, 704-710 (2013).
- J.E. Martin-Alfonso; C. Valencia; M.C. Sánchez; J.M. Franco; C. Gallegos. "The effect of recycled polymer addition on the thermorheological behaviour of modified lubricating greases". *Polymer Engineering and Science* 53, 818-826 (2013).
- M.A. Izquierdo; F.J. Navarro; F. Martínez-Boza; C. Gallegos. "Effects of MDI-PPG molecular weight on the thermorheological behaviour of MDI-isocyanate based bituminous foams". *Journal of Industrial and Engineering Chemistry* 19, 704-711 (2013).
- D. Ruiz-Márquez; P. Partal; J.M. Franco; C. Gallegos. "Linear viscoelastic behaviour of oil-in-water food emulsions stabilised by tuna-protein isolates". *Food Science and Technology International* 19, 3-10 (2013).
- L.A. García-Zapateiro; J.M. Franco; C. Valencia; M.A. Delgado; C. Gallegos; M.V. Ruiz-Méndez. "Chemical, thermal and viscous characterization of high-oleic sunflower and olive pomace acid oils and derived estolides". *Grasas y Aceites* 64, 497-508 (2013).
- L.A. García-Zapateiro; J.M. Franco; C. Valencia; M.A. Delgado; C. Gallegos; M.V. Ruiz-Méndez. "Viscosity modification of high-oleic sunflower and castor oil-derived estolides for lubricant applications". *European Journal of Lipid Science and Technology* 115, 1173-1182 (2013).
- I. Martínez; P. Partal; M. García-Morales; A. Guerrero; C. Gallegos. "Development of protein-based bioplastics with antimicrobial activity by thermomechanical processing". *J. Food Eng.* 117, 247-254 (2013).
- L. Quinchia; M.A. Delgado; T. Reddyhoff; C. Gallegos; H.A. Spikes. "Tribological studies of potential vegetable oil-based lubricants containing environmentally friendly viscosity modifiers". *Tribology International* 69, 110-117 (2014).
- M. Salinas-Vázquez; W. Vicente; E. Brito-de la Fuente; C. Gallegos; J. Márquez; G. Ascanio. "Early numerical studies on the peristaltic flow through the pharynx". *Journal of Texture Studies* (2014), in press.
- J. Hermoso; F. Martínez-Boza; C. Gallegos. "Influence of viscosity modifier nature and concentration on the viscous flow behaviour of oil-based drilling fluids at high pressure". *Applied Clay Science* 87, 14-21 (2014).

PATENTS

Inventors: F.J. Navarro; P. Partal; F.J. Martínez-Boza; C. Gallegos
Title: Asphalt Compositions. P200400978 (2004).
Entity: Universidad de Huelva

Inventors: A.Jerez; P. Partal; I. Martínez-García; C. Gallegos; A. Guerrero
Title: Bioplastic and its manufacturing method. P200501446 (2005).
Entity: Universidad de Huelva

Inventors: C. Fuentes; F.J. Navarro; F.J. Martínez-Boza; P. Partal; C. Gallegos
Title: Synthetic binder for road and roofing applications. P200502779 (2005).
Entity: Universidad de Huelva

Inventors: Y. Vergara; P. Partal; C. Gallegos; A. Guerrero; I. Martínez; A. Jerez; M.A. García
Title: Bioplastic with antimicrobial activity. P200700704 (2007).
Industry: OX-Compañía de Tratamientos de Aguas S.L.

Inventors: A. Páez; A. Pérez-Lepe; E. Romero; F.J. Martínez-Boza; P. Partal; F.J. Navarro; C. Gallegos
Title: Tyre-rubber modified bitumen. P200702878 (2007).
Industry: Repsol YPF S.A.

Inventors: L. Quinchia; C. Gallegos; J.M. Franco; C. Valencia; M.A. Delgado
Title: Vegetable oil viscosity modifiers additives for biolubricant applications. P200800879 (2008).
Entity: Universidad de Huelva

Inventors: A. Páez; E. Moreno; E. Romero; F.J. Martínez-Boza; P. Partal; F.J. Navarro; C. Gallegos; A. Bardesi
Title: Procedure for bitumen submicron emulsions continuous manufacture. P200900243 (2009).
Industry: Repsol YPF S.A.

Inventors: D. Gómez-Martínez; M. García-Morales; I. Martínez; P. Partal; C. Gallegos;
Title: Biodegradable films for bags and its manufacturing method. P200901035 (2009).
Industry: Plásticos Alhambra S.L.

Inventors: L. Quinchia; M.A. Delgado; J.M. Franco; C. Valencia; C. Gallegos
Title: Ethyl cellulose as vegetable oil viscosity modifier for biolubricant applications. P201030961 (2010).
Entity: Universidad de Huelva

Inventors: P. Partal; F.J. Navarro; M. García-Morales; F.J. Martínez-Boza; C. Gallegos; I. Martínez; V. Carrera; A. Cuadri
Title: Bituminous binder for pavement recycling. P201000398 (2010)
Entity: Universidad de Huelva

Inventors: M.T. García Torres; F.J. Martínez Fernández; I. Martínez; C. Gallegos; P. Partal; F.J. Martínez-Boza;
F.J. Navarro; M. García-Morales; R. Ayllón
Title: Process for the development of modified bituminous mastics for application at high temperature and product formulation. P201119100000319 (2011)
Entity: Fundación Centro Tecnológico Andaluz de la Piedra

Inventors: M.T. García Torres; F.J. Martínez Fernández; I. Martínez; C. Gallegos; P. Partal; F.J. Martínez-Boza; F.J. Navarro; M. García-Morales; R. Ayllón

Title: Process for the development of modified bituminous mastics for application as flexible sheets and product formulation. P201100355 (2011)

Entity: Fundación Centro Tecnológico Andaluz de la Piedra

Inventors: S. Gil; F.J. Martínez-Boza; F.J. Navarro; P. Partal; C. Gallegos; J.J. Potti; J.L. Peña; D. Peinado; F.J. Suárez; J.M. Martínez

Title: Device for the measurement of flow properties during compression of solid-fluid mixtures. P201130845 (2011).

Industry: Repsol YPF S.A.

Inventors: C. Gallegos; E. Brito; J. Mainou; L. Quinchia; M. Jozami; C. Valencia; J.M. Franco

Title: "Compositions for dysphagia assessment". EU patent 12159590.4 - 1216 (May 2012); US patent 61/611,053 (March 2012); WO 2013/135737 A1

Entity: Fresenius Kabi Deutschland GmbH

Inventors: C. Gallegos; E. Brito; L. Quinchia; E. Pestana; N. Staudinger-Prevost; G. Assegehegn

Title: "Compositions for use in nutrition of dysphagia patients". EU patent 13161643.5 - 1357 (July 2013)

Entity: Fresenius Kabi Deutschland GmbH

RESEARCH PROJECTS SUPPORTED BY PUBLIC ADMINISTRATIONS (1991-2012)

"Sucrose esters as food emulsifiers". M.E.C. (Spain). 1991-1993.

"Influence of processing parameters on emulsion homogenization: rheologically-controlled processes". M.E.C. (Spain). 1993-1996.

"Mass transfer in supercritical extraction with solids and liquids". M.E.C. (Spain). 1995-1998.

"Microstructure and processing of food emulsions". Spanish-British Integrated Projects. 1996-1997.

"Optimization of composition and processing of food emulsions with low cholesterol content". M.E.C. (Spain). 1996-1999.

"Asymptotic theory of thin walled structures applied to characterisation of viscoelastic materials". INTAS Project, EU. 1997-2000.

"Physical and sensorial characterization of vegetable protein-stabilized food emulsions: influence of composition and processing". Spanish-Portuguese Integrated Projects. 1997-1999.

"Bitumen modification with crosslinking polymers". M.E.C. (Spain). 1999-2001.

"Relationship between viscoelastic behaviour and microstructure of low-in-fat food formulations". A.E.C.I. (Spain). 2000.

"Formulation of emulsions stabilized by synthetic amphiphilic molecules: food applications". A.E.C.I. (Spain). 2000-2001.

"Rheological characterization and optimization of reactive polymer-modified bitumen formulations". Spanish-Portuguese Integrated Projects. 2001-2003.

"Optimization of lubricating grease processing variables as a function of rheological and microstructural characteristics". M.E.C. (Spain). 2001-2004.

"Simultaneous effects of pressure and temperature on enzyme inactivation and its influence on organoleptic and nutritional quality of tomato juice". M.C.Y.T.-PROFIT Programme (Spain). 2002.

"Rheological characterization of heavy fuel oil fractions at high pressure". M.C.Y.T. (Spain). 2004-2006.

"Improvement of the rheological properties of lubricating greases by the addition of recycled and functional polymers". D.G.I.-M.E.C. (Spain). 2004-2007.

"New polymer modified bitumen formulations for roofing applications". M.E.C. (Spain). 2004-2007.

"Use of waste tyre rubber and recycled plastics to improve the performance of bitumen for road and roofing applications". D.G.C.E.A.-M.M.A (Spain). 2005-2007.

"Formulation and processing of new biodegradable lubricating greases". Consejería de Innovación, Ciencia y Empresa- Junta de Andalucía (Spain). 2006-2008.

"Biolubricants based on vegetable oils and synthetic derivatives. Biovesin". M.E.C. (Spain). 2007-2010.

"Bioplastics from agricultural by-products for packaging and diffusion matrices applications". Consejería de Innovación, Ciencia y Empresa- Junta de Andalucía (Spain). 2007-2010.

"Formulation and processing of polymer-modified bituminous foams and emulsions". M.E.C. (Spain). 2007-2010.

"New biodegradable lubricating grease formulations based on vegetable oils and cellulose derivatives". M.E.C. (Spain). 2007-2010.

"High-pressure mixing rheometry". Consejería de Innovación, Ciencia y Empresa- Junta de Andalucía (Spain). 2009-2011.

"Biopolymer chemical modification: use as vegetable oil thickener for lubricating biogrease applications". M.E.C. (Spain). 2010-2013.

"Bioplastics from agricultural by-products for packaging and diffusion matrices applications". M.E.C. (Spain). 2010-2011.

RESEARCH CONTRACTS WITH CHEMICAL, PHARMACEUTICAL AND FOOD INDUSTRIES (2001-2010).

INDUSTRY: Tubespa, S.A. 2001 (subject: polymer characterization)

INDUSTRY: Neumáticos Onubenses S.L. 2003 (subject: waste polymers)

INDUSTRY: Unión Resinera S.A. 2003 (subject: adhesives)

INDUSTRY: Repsol YPF S.A. 2003 (subject: oil recovery at high pressure)

INDUSTRY: Repsol YPF S.A. 2003-2004 (subject: high pressure rheology of oil fractions).

INDUSTRY: Repsol YPF S.A. 2004-2007 (subject: new bitumen formulations).

INDUSTRY: Fresenius-Kabi Deutschland GmbH. 2005-2006 (subject: enteral nutrition formulations).

INDUSTRY: Repsol YPF S.A. 2005-2007 (subject: polymer-modified bitumen).

INDUSTRY: Voridian España S.A. 2005 (subject: polymer rheology).

INDUSTRY: Refractarios Alfran S.A. 2005-2006 (subject: rheology of cements).

INDUSTRY: OX-Compañía de Tratamientos de Aguas S.L. 2005-2006 (subject: bioplastic applications).

INDUSTRY: Fresenius-Kabi Deutschland GMBH. 2006 (subject: parenteral emulsions).

INDUSTRY: Verkol S.A. 2006-2009 (subject: lubricants for high-speed trains).

INDUSTRY: Total France. 2007-2008 (subject: lubricating greases).

INDUSTRY: Fresenius-Kabi Deutschland GmbH. 2007-2008 (subject: processing of new enteral nutrition formulations).

INDUSTRY: OX-Compañía de Tratamientos de Aguas S.L. 2007 (subject: new bioplastic applications).

INDUSTRY: Repsol YPF S.A. 2007-2010 (subject: formulation and processing of bitumen emulsions).

INDUSTRY: Repsol YPF S.A. 2007-2008 (subject: formulation and processing of waste polymer-modified bitumen products).

INDUSTRY: Agrupación de Investigación Estratégica. 2007-2010 (subject: enhancement of bitumen performance for road applications).

INDUSTRY: Tioxide Europe and Iniciativas Agroindustriales de Teruel. 2007-2008 (subject: new by-product applications).

INDUSTRY: Atlantic Copper S.A. 2007-2008 (subject: process optimization).

INDUSTRY: Repsol YPF S.A. 2007 (subject: high pressure rheology of lubricants).

INDUSTRY: Geolén Ingeniería S.L. 2007 (subject: recycled bitumen pavements).

INDUSTRY: Tioxide Europe S.L. e Iniciativas Agoindustriales de Teruel S.L. 2007-2008 (subject: by-products valorization).

INDUSTRY: Plásticos Alhambra S.L. 2007-2008 (product and process design of new bioplastics).

INDUSTRY: Fresenius-Kabi Deutschland GmbH. 2008 (subject: enteral emulsion-based product design).

INDUSTRY: Total France. 2009-continues. CONSULTANT (subject: industrial lubrication).

INDUSTRY: Algry Quimica S.L. 2009 (subject: thermal, microstructural, and mechanical characterization of pharmaceutical products).

INDUSTRY: Petróleo Brasileiro S.A.-Petrobras 2009 (subject: drilling fluids high pressure rheology).

INDUSTRY: Fresenius-Kabi Deutschland GmbH. 2009 (subject: texture control and product design).

INDUSTRY: Repsol YPF S.A. 2009 (subject: formulation and processing of stable tire rubber-modified bitumen products).

INDUSTRY: Centro Tecnológico Andaluz de la Piedra. 2009 (subject: waste powders as fillers for bitumen applications).

INDUSTRY: Fresenius-Kabi Deutschland GmbH. 2010 (subject: texture control and product design).

INDUSTRY: Azvi S.A. 2010 (subject: biorefinery waste products as potential bitumen modifiers).

INDUSTRY: Innomater S.L. 2009-2010 (subject: waste products as potential bitumen modifiers).

INDUSTRY: Repsol YPF S.A. 2010-2011 (subject: bitumen cold mixtures applications).

INDUSTRY: Agrupación de Investigación Estratégica. 2010 (subject: design of a new rheometer for asphalt mixtures characterization).

INDUSTRY: Fresenius-Kabi Deutschland GmbH. 2011 (subject: texture control and product design).