Ole Hassager - Research outputs - DTU Orbit (12/08/2019)

Electro-Thermal Model of Thermal Breakdown in Multilayered Dielectric Elastomers
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review

On the universality in the extensional rheology of monodisperse polymer melts and oligomer dilutions thereof
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review

Unexpected Stretching of Entangled Ring Macromolecules
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review

Extension induced phase separation and crystallization in semidilute solutions of ultra high molecular weight polyethylene
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Flow induced crystallization prevents melt fracture of HDPE in uniaxial extensional flow
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Highly Anisotropic Glassy Polystyrenes Are Flexible
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Linear shear and nonlinear extensional rheology of unentangled supramolecular side-chain polymers
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Nonlinear Elongational Rheology of Unentangled Polystyrene and Poly(p-tert-butylstyrene) Melts
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Simulation of Thermal Breakdown in a Multi-layered Stack of Dielectric Elastomers
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2018 › Research › peer-review

Structural studies of three-arm star block copolymers exposed to extreme stretch suggests persistent polymer tube
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Brittle fracture of polymer transient networks
Research output: Contribution to journal › Journal article – Annual report year: 2017 › Research › peer-review

Brittle fracture of polymer transient networks
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2017 › Research › peer-review
Crystallinity of polyethylene in uni-axial extensional flow
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2017 › Research › peer-review

Discussion of paper by A. Shabbir, Q. Huang, G. Baeza, D. Vlassopoulos, Q. Chen, R. H. Colby, N. J. Alvarez and O. Hassager, entitled 'Nonlinear shear and uni-axial extensional rheology of polyether-ester-sulfonate copolymer ionomer melts'
Research output: Contribution to journal › Comment/debate – Annual report year: 2018 › Research › peer-review

Discussion of paper by J. Zhao, K. Mayumi, C. Creton and T. Narita, entitled 'Rheological properties of tough hydrogels based on an associating polymer with permanent and transient crosslinks: Effects of crosslinking density'
Research output: Contribution to journal › Comment/debate – Annual report year: 2018 › Research › peer-review

Discussion of paper by S. Aime, N. D. Eisenmenger and T. A. P. Engels, entitled 'A model for failure in thermoplastic elastomers based on Eyring kinetics and network connectivity'
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Discussion of paper by S. Arora, A. Shabbir, O. Hassager, C. Ligoure, L. Ramos, entitled 'Brittle fracture of polymer transient networks'
Research output: Contribution to journal › Comment/debate – Annual report year: 2018 › Research › peer-review

Extensional Rheology and flow-induced crystallization of polyethylene above Tm
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2017 › Research › peer-review

Extentional rheology and final morphology of LDPE fibers
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2017 › Research › peer-review

Fracture in Soft Materials
Hassager, O., 2017. 1 p.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2017 › Research › peer-review

Hvornår bryder en kunstig muskel sammen? Simulering af termiske sammenbrud i dielektriske elastomerer
Research output: Contribution to journal › Journal article – Annual report year: 2017 › Communication

Influence of extensional stress overshoot on crystallization of LDPE
Research output: Contribution to journal › Journal article – Annual report year: 2017 › Research › peer-review
Extensional rheology of entangled polystyrene solutions suggests importance of nematic interactions


Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2013 › Research › peer-review

Extensional Rheology of Entangled Polystyrene Solutions Suggests Importance of Nematic Interactions


Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Stress relaxation of entangled polystyrene solution after constant-rate, uniaxial elongation


Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2013 › Research › peer-review

Strongly non-linear extensional stress in polystyrene melts undergoing large steady rate extensional flows combined with structural characterization by neutron scattering measurements


Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2013 › Research › peer-review

The chromatographic separation of particles using optical electric fields


Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Transient overshoot extensional rheology of long-chain branched polyethylenes: Experimental and numerical comparisons between filament stretching and cross-slot flow


Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Are Entangled Polymer Melts Different From Solutions?


Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2012 › Research

Experimental Investigation Of High Molar Mass Impurities In Steady Elongational Viscosity Samples


Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2012 › Research › peer-review

Mechanism of spontaneous hole formation in thin polymeric films


Research output: Contribution to journal › Journal article – Annual report year: 2012 › Research › peer-review

Non-Linear Rheological Properties and Neutron Scattering Investigation on Dilute Ring-Linear Blends


Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2012 › Research

Reply to ‘On the “viscosity overshoot” during the uniaxial extension of a low density polyethylene’


Research output: Contribution to journal › Journal article – Annual report year: 2012 › Research › peer-review
The dynamics of cylindrical samples in dual wind-up extensional rheometers
Research output: Contribution to journal › Journal article – Annual report year: 2011 › Research › peer-review

3D modeling of dual wind-up extensional rheometers
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

3D Simulation of Nano-Imprint Lithography
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

A Theoretical Study of the Separation Principle in Size Exclusion Chromatography
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

Constitutive equations for the Doi-Edwards model without independent alignment
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

Does the interchain pressure effect exist in flow of polymer melt?
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2010 › Research › peer-review

Experimental evaluation of the pure configurational stress assumption in the flow dynamics of entangled polymer melts
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

Extension of cylindrical samples in the Sentmanat Extensional Rheometer (SER)
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2010 › Research › peer-review

From Buffon's Needle to Partitioning of Polymers in Confining Pores
Research output: Contribution to conference › Poster – Annual report year: 2010 › Research

How big are Polymers? The span dimension as a measure of polymer size
Research output: Contribution to conference › Paper – Annual report year: 2010 › Research

Large Amplitude Oscillatory Extension of Soft Polymeric Networks
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

Linear and nonlinear viscoelastic properties of bidisperse linear polymers: Mixing law and tube pressure effect
van Ruymbeke, E., Nielsen, J. & Hassager, O., 2010, In : Journal of Rheology. 54, 5, p. 1155-1172
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

Modeling of dual cylinder wind-up extensional rheometers
Planar elongation of soft polymeric networks

Polymeric liquids in extension: fluid mechanics or rheometry?

Reversed extensional flow on polyisoprene melts

Reversible large amplitude planar extension of soft elastomers

Reversible planar elongational of soft polymeric networks

Silicone based electroactive polymers: application driven development

The critical molecular size parameter in size exclusion chromatography: Theory and experimental evidence

Characterization of Polymer Networks by Swelling

Determination of the concentration profile and homogeneity of antioxidants and degradation products in a cross-linked polyethylene type A (PEXa) pipe

Equilibrium partitioning of polymers between bulk dilute solution and confining pores
Stochastic Simulation of Filament Gliding Powered by Molecular Motor
Research output: Contribution to conference › Poster – Annual report year: 2009 › Research › peer-review

A constitutive analysis of transient and steady-state elongational viscosities of bidisperse polystyrene blends
Research output: Contribution to journal › Journal article – Annual report year: 2008 › Research › peer-review

Constitutive equation for polymer networks with phonon fluctuations
Research output: Contribution to journal › Journal article – Annual report year: 2008 › Research › peer-review

Constitutive equation for polymer networks with phonon fluctuations
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2008 › Research

Elongational Dynamics of Narrow Molar Mass Distribution Linear and Branched Polystyrene Melts
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2008 › Research › peer-review

Equilibrium partitioning of macromolecules in confining geometries: Improved universality with a new molecular size parameter
Research output: Contribution to journal › Journal article – Annual report year: 2008 › Research › peer-review

Proof of the identity between the depletion layer thickness and half the average span for an arbitrary polymer chain
Research output: Contribution to journal › Journal article – Annual report year: 2008 › Research › peer-review

Rheology and Adhesive Performance of Soft Polymeric Networks
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2008 › Research › peer-review

Stress relaxation of narrow molar mass distribution polystyrene following uniaxial extension
Research output: Contribution to journal › Journal article – Annual report year: 2008 › Research › peer-review

A general method to study equilibrium partitioning of macromolecules
Research output: Non-textual form › Sound/Visual production (digital) – Annual report year: 2007 › Research
An all-polymer micropump based on the conductive polymer poly(3,4-ethylenedioxythiophene) and a polyurethane channel system
Research output: Contribution to journal › Journal article – Annual report year: 2007 › Research › peer-review

A Study of SEC Chromatograms on the basis of Polymer Structure Calculations
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2007 › Research › peer-review

A study of SEC chromatograms on the basis of polymer structure properties
Research output: Non-textual form › Sound/Visual production (digital) – Annual report year: 2007 › Research

Direct Fast Patterning of Conductive Polymers Using Agarose Stamping
Research output: Contribution to journal › Journal article – Annual report year: 2007 › Research › peer-review

Extensional Stress Relaxation in Polymer Melts
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2007 › Research › peer-review

Highly stretchable and conductive polymer material made from poly (3,4-ethylenedioxythiophene) and polyurethane elastomers
Research output: Contribution to journal › Journal article – Annual report year: 2007 › Research › peer-review

Measurement of Material Functions in Extensional Flow Using the Filament Stretch Rheometer
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2007 › Research › peer-review

Micropatterning of a stretchable conductive polymer using inkjet printing and agarose stamping
Research output: Contribution to journal › Journal article – Annual report year: 2007 › Research › peer-review

Modeling of the release of organic compounds from polyethylene pipes to water
Research output: Contribution to journal › Journal article – Annual report year: 2007 › Research › peer-review

Modelling of the release of organic compounds from polyethylene pipes to water
Research output: Contribution to journal › Journal article – Annual report year: 2007 › Research › peer-review

Patterned conducting polymers for all-polymer cell electroporation microsystems
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2007 › Research
Release of organic compounds from polyethylene pipes to drinking water: Effect of physical/chemical parameters

Release of organic compounds from polyethylene pipes to drinking water: An evaluation of the Danish and European certification procedure

Uniaxial Elongational viscosity of bidisperse polystyrene melts

Elongational viscosity of monodisperse and bidisperse polystyrene melts

Filament stretching rheometry of polymer melts

Prediction of Gas Solubility in Flexible Polymers

Quantitative prediction of transient and steady-state elongational viscosity of nearly monodisperse polystyrene melts

Time Dependent and Steady Uni-axial Elongational Viscosity

Uni-axial Elongational Viscosity of Linear and Branched polymer melts

Viscosity overshoot in the start-up of uniaxial elongation of low density polyethylene melts
Direct measurement of gas solubilities in polymers with a high-pressure microbalance
Research output: Contribution to journal › Journal article – Annual report year: 2004 › Research › peer-review

Direct Measurement of Gas Solubilities in Polymers Using a High-Pressure Microbalance
Research output: Contribution to journal › Journal article – Annual report year: 2004 › Research › peer-review

How to tune rubber elasticity
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2004 › Research › peer-review

Oxygen diffusion in bilayer polymer films
Research output: Contribution to journal › Journal article – Annual report year: 2004 › Research › peer-review

Polymer Fluid Mechanics: Molecular orientation and stretching
Research output: Contribution to conference › Paper – Annual report year: 2004 › Research

Some experimental results for end-linked polydimethylsiloxane network system
Research output: Contribution to journal › Journal article – Annual report year: 2004 › Research › peer-review

Viscosity overshoot followed by steady state measured in uni-axial elongation of LDPE. Ole Hassager, Henrik Kobitz Rasmussen, Anders Bach and Jens Kromann Nielsen
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2004 › Research › peer-review

Elastic properties of nonstoichiometric reacted PDMS networks
Research output: Contribution to journal › Journal article – Annual report year: 2003 › Research › peer-review

Elongational flows in polymer processing
Research output: Contribution to conference › Paper – Annual report year: 2003 › Research

Elongational viscosity of narrow molnar mass distribution polystyrene
Research output: Contribution to journal › Journal article – Annual report year: 2003 › Research › peer-review

Extensional viscosity for polymer melts measured in the filament stretching rheometer
Research output: Contribution to journal › Journal article – Annual report year: 2003 › Research › peer-review

Solubility of Gases in Flexible Polymers
Measurements of Transient Elongational Viscosity
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2000 › Research › peer-review

Overview of elongational flow activities at the DTU
Research output: Contribution to conference › Paper – Annual report year: 2000 › Research

Polymers in Extension
Research output: Contribution to conference › Paper – Annual report year: 2000 › Research › peer-review

Analytical solutions for squeeze flow with partial wall slip
Research output: Contribution to journal › Journal article – Annual report year: 1999 › Research › peer-review

End-plate Instability in Polymeric Filaments: The Influence of Surface Tension
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1999 › Research › peer-review

End-plate instability in polymeric filament: The influence of surface tension
Hassager, O., 1999.
Research output: Contribution to conference › Paper – Annual report year: 1999 › Research › peer-review

Inflation and Instability of a Polymeric Membrane
Research output: Contribution to journal › Journal article – Annual report year: 1999 › Research › peer-review

Inflation and Instability of a Polymeric Membrane
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1999 › Research › peer-review

Inflation and Instability of a Polymeric Membrane
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1999 › Research

Measurements of Biaxial Flow by Membrane Inflation
Hassager, O., 1999.
Research output: Contribution to conference › Paper – Annual report year: 1999 › Research › peer-review

Modeling of Pressure Effects in HVDC Cables
Research output: Contribution to journal › Journal article – Annual report year: 1999 › Research › peer-review

Molecular model for solubility of gases in flexible polymers
Monte Carlo simulation of diblock copolymer microphases by means of a ‘fast’ off-lattice model

Numerical Simulation of Wire-Coating: The Influence of Temperature Boundary Conditions

On viscoelastic instability in polymeric filaments

Three-dimensional simulations of viscoelastic instability in polymeric filaments

Capillary thinning of polymeric filaments

Failure and nonfailure of fluid filaments in extension

Inflation of a Polymeric Membrane

Observations of peeling of a polyisobutylene-based pressure-sensitive adhesive

Simulation of 3D Time-Dependent Viscoelastic flow: Elastic Instability in polymeric filaments

Spectral element simulation of ultrafiltration
The unsteady motion of a sphere in a viscoelastic fluid
Research output: Contribution to journal › Journal article – Annual report year: 1994 › Research › peer-review

Rheological characterization of media containing Penicillium chrysogenum
Research output: Contribution to journal › Journal article – Annual report year: 1993 › Research › peer-review

Simulation of Transient Viscoelastic Flow
Research output: Contribution to journal › Journal article – Annual report year: 1993 › Research › peer-review

Simulation of Transient Viscoelastic Flow
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1996 › Research › peer-review

Simulation of Transient Viscoelastic Flow with Integral Method
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1996 › Research › peer-review

Simulation of transport phenomena in ultrafiltration
Research output: Contribution to journal › Journal article – Annual report year: 1993 › Research › peer-review

Flow of viscoplastic fluids in a rotating concentric annulus
Research output: Contribution to journal › Journal article – Annual report year: 1992 › Research › peer-review

Flow of viscoplastic fluids in eccentric annular geometries
Research output: Contribution to journal › Journal article – Annual report year: 1992 › Research › peer-review

Flow of viscoplastic fluids in eccentric annular geometries
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1992 › Research

Gravity waves and Rayleigh Taylor instability on a Jeffrey-fluid
Research output: Contribution to journal › Journal article – Annual report year: 1991 › Research › peer-review

The quarterbend: A three-dimensional benchmark problem
Research output: Contribution to journal › Journal article – Annual report year: 1991 › Research › peer-review

Limitation on the use of the retarded motion expansion
Research output: Contribution to journal › Journal article – Annual report year: 1990 › Research › peer-review
A new moving finite element method based on quadratic approximation functions
Research output: Contribution to journal › Journal article – Annual report year: 1989 › Research › peer-review

Corner Flow of Power Law Fluids
Henriksen, P. & Hassager, O., 1989, In : Journal of Rheology. 33, 6, p. 865-879
Research output: Contribution to journal › Journal article – Annual report year: 1989 › Research › peer-review

Creeping motion of long bubbles and drops in capillary tubes
Research output: Contribution to journal › Journal article – Annual report year: 1989 › Research › peer-review

Viscoelastic behavior
Research output: Contribution to journal › Journal article – Annual report year: 1989 › Research › peer-review

Singular behavior of power law fluids in Hele Shaw flow
Research output: Contribution to journal › Journal article – Annual report year: 1988 › Research › peer-review

Working group on numerical techniques
Research output: Contribution to journal › Journal article – Annual report year: 1988 › Research › peer-review

Analysis of the transient rotating cylinder apparatus for the measurement of liquid-liquid interface shear viscosity
Research output: Contribution to journal › Journal article – Annual report year: 1987 › Research › peer-review

Dynamics of polymeric liquids: Fluid mechanics
Research output: Book/Report › Compendium/lecture notes – Annual report year: 1987 › Education

Dynamics of polymeric liquids: Kinetic theory
Research output: Book/Report › Compendium/lecture notes – Annual report year: 1987 › Education

An algorithm for the use of the Lagrangian specification in Newtonian fluid mechanics and applications to free-surface flow
Research output: Contribution to journal › Journal article – Annual report year: 1985 › Research › peer-review

DO POLYMERS REALLY CLIMB RODS?
Research output: Contribution to journal › Journal article – Annual report year: 1985 › Research › peer-review

A lagrangian finite element method for the simulation of flow of Newtonian liquids
Research output: Contribution to journal › Journal article – Annual report year: 1984 › Research › peer-review

Processor operated correlator with applications to laser Doppler signals
Research output: Contribution to journal › Journal article – Annual report year: 1984 › Research › peer-review

A Lagrangian finite element method for the simulation of flow of non-newtonian liquids
Research output: Contribution to journal › Journal article – Annual report year: 1983 › Research › peer-review