## Arantxa Arbe

## List of Publications by Year in descending order

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Disentangling Component Dynamics in an All-Polymer Nanocomposite Based on Single-Chain
Nanoparticles by Quasielastic Neutron Scattering. Macromolecules, 2022, 55, 2320-2332.

High magnetization FeCo nanoparticles for magnetorheological fluids with enhanced response. Soft Matter, 2021, 17, 840-852.
2.7

Selfâ€Reporting of Folding and Aggregation by Orthogonal Hantzsch Luminophores Within a Single
Polymer Chain. Angewandte Chemie - International Edition, 2021, 60, 3534-3539.
13.8

Selfâ $€$ Reporting of Folding and Aggregation by Orthogonal Hantzsch Luminophores Within a Single

Disentangling Self-Atomic Motions in Polyisobutylene by Molecular Dynamics Simulations. Polymers, 2021, 13, 670.

Crowding Effects on the Structure and Dynamics of the Intrinsically Disordered Nuclear Chromatin
Protein NUPR1. Frontiers in Molecular Biosciences, 2021, 8, 684622.

Dynamic Processes and Mechanisms Involved in Relaxations of Single-Chain Nano-Particle Melts.
$7 \quad$ Polymers, 2021, 13, 2316.

8 Advances in the Multi-Orthogonal Folding of Single Polymer Chains into Single-Chain Nanoparticles.
Polymers, 2021, 13, 293.
9 Collective Motions and Mechanical Response of a Bulk of Single-Chain Nano-Particles Synthesized by
$9 \quad$ Click-Chemistry. Polymers, 2021, 13, 50.

10 Unraveling the coherent dynamic structure factor of liquid water at the mesoscale by molecular dynamics simulations. Journal of Chemical Physics, 2021, 155, 244509.
3.0

11

Modeling the high frequency mechanical relaxation of simplified industrial polymer mixtures using
Modeling the high frequency mechanical relaxation of sim
dielectric relaxation results. Polymer, 2020, 187, 122051 .

12 Cyclic Polyethylene Glycol as Nanoparticle Surface Ligand. ACS Macro Letters, 2020, 9, 1604-1610.
4.8

10

> 13 Concentration Fluctuations and Nanosegregation in a Simplified Industrial Blend with Large Dynamic Asymmetry. Macromolecules, 2020, 53, $7150-7160$.

Structure and Dynamics of Irreversible Single-Chain Nanoparticles in Dilute Solution. A Neutron Scattering Investigation. Macromolecules, 2020, 53, 8068-8082.
4.8

Insight into the Structure and Dynamics of Polymers by Neutron Scattering Combined with Atomistic
15 Molecular Dynamics Simulations. Polymers, 2020, 12, 3067.
4.5

17

How Does Microstructural Design Affect the Dynamics and Rheology of Segmented Polyurethanes?.
Macromolecules, 2020, 53, 5381-5398.
Tube Dilation in Isofrictional Polymer Blends Based on Polyisoprene with Different Topologies:
17 Combination of Dielectric and Rheological Spectroscopy, Pulsed-Field-Gradient NMR, and Neutron
Spin Echo (NSE) Techniques. Macromolecules, 2020, 53, 5919-5936.
Single-chain nanoparticles: opportunities provided by internal and external confinement. Materials
Horizons, 2020, 7, 2292-2313.
Direct Observation of Dynamic Tube Dilation in Entangled Polymer Blends: A Combination of Neut
Scattering and Dielectric Techniques. Physical Review Letters, 2019, 123, 187802.
24 Mesoscale Dynamics in Melts of Single-Chain Polymeric Nanoparticles. Macromolecules, 2019, 52,
6935-6942.
$27 \quad$ Facile Access to Completely Deuterated Singleâ€Chain Nanoparticles Enabled by Intramolecular Azide Photodecomposition. Macromolecular Rapid Communications, 2019, 40, 1900046.

$$
\begin{aligned}
& 37 \text { Ultrafiltration of single-chain polymer nanoparticles through nanopores and nanoslits. Polymer, } \\
& 2018,148,61-67 \text {. }
\end{aligned}
$$

Folding Single Chains to Single-Chain Nanoparticles via Reversible Interactions: What Size Reduction Can One Expect?. Macromolecules, 2017, 50, 1732-1739.

The Role of the Topological Constraints in the Chain Dynamics in All-Polymer Nanocomposites. Macromolecules, 2017, 50, 1719-1731.

Poly(butylene succinate-ran-Î $\mu$-caprolactone) copolyesters: Enzymatic synthesis and crystalline isodimorphic character. European Polymer Journal, 2017, 95, 795-808.
5.4

41

Relaxations and Relaxor-Ferroelectric-Like Response of Nanotubularly Confined Poly(vinylidene) Tj ETQq1 10.784314. rgBT /Oyerlock

Acrylic-based composite latexes containing nano-sized liquid crystalline domains. Polymer, 2017, 108, 288-300.

Supramolecular Self-Assembly of Monocarboxydecyl-Terminated Dimethylsiloxane Oligomer.
Macromolecules, 2017, 50, 8688-8697.

Investigation of the dynamics of aqueous proline solutions using neutron scattering and molecular dynamics simulations. Physical Chemistry Chemical Physics, 2017, 19, 27739-27754.

Size of Elastic Single-Chain Nanoparticles in Solution and on Surfaces. Macromolecules, 2017, 50, 6323-6331.

Plasticization and cocrystallization in L<scp>LDPE</scp>/wax blends. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1469-1482.

A Solventâ€Based Strategy for Tuning the Internal Structure of Metalloâ€Folded Singleâ€Chain
Nanoparticles. Macromolecular Rapid Communications, 2016, 37, 1060-1065.

Structure and component dynamics in binary mixtures of poly(2-(dimethylamino)ethyl methacrylate)
48 with water and tetrahydrofuran: A diffraction, calorimetric, and dielectric spectroscopy study. Journal of Chemical Physics, 2016, 144, 154903.

Dielectric relaxation analysis of hybrid acrylicâ€"polyurethane gels. Materials Today Communications, 2016, 8, 100-107.

50 Structure and dynamics of single-chain nano-particles in solution. Polymer, 2016, 105, 532-544.
3.8

44

Application of SSA thermal fractionation and X-ray diffraction to elucidate comonomer inclusion or
51 exclusion from the crystalline phases in poly(butylene succinate-ran-butylene azelate) random 2.1
copolymers. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 2346-2358.
Synthesis and Characterization of Double Crystalline Cyclic Diblock Copolymers of
 Macromolecular Rapid Communications, 2016, 37, 1676-1681.

An unexpected route to aldehyde-decorated single-chain nanoparticles from azides. Polymer
Chemistry, 2016, 7, 6570-6574.
3.9

12

The role of PLLA-g-montmorillonite nanohybrids in the acceleration of the crystallization rate of a commercial PLA. CrystEngComm, 2016, 18, 9334-9344.

| 55 | A Useful Methodology for Determining the Compaction Degree of Singleâ€Chain Nanoparticles by Conventional SEC. Particle and Particle Systems Characterization, 2016, 33, 373-381. | 2.3 | 10 |
| :---: | :---: | :---: | :---: |
| 56 | Phase behavior of side-chain liquid-crystalline polymers containing biphenyl mesogens with different spacer lengths synthesized <i>via</i> miniemulsion polymerization. Polymer Chemistry, 2016, 7, 4736-4750. | 3.9 | 20 |
| 57 | Role of Dynamic Asymmetry on the Collective Dynamics of Comblike Polymers: Insights from Neutron Spin-Echo Experiments and Coarse-Grained Molecular Dynamics Simulations. Macromolecules, 2016, 49, 4989-5000. | 4.8 | 6 |
| 58 | Sequential crystallization and morphology of triple crystalline biodegradable PEO-b-PCL-b-PLLA triblock terpolymers. RSC Advances, 2016, 6, 4739-4750. | 3.6 | 19 |
| 59 | Concentrated Solutions of Single-Chain Nanoparticles: A Simple Model for Intrinsically Disordered Proteins under Crowding Conditions. Journal of Physical Chemistry Letters, 2016, 7, 838-844. | 4.6 | 64 |
| 60 | Single Chain Dynamic Structure Factor of Linear Polymers in an All-Polymer Nano-Composite. Macromolecules, 2016, 49, 2354-2364. | 4.8 | 36 |
| 61 | Efficient Synthesis of Single-Chain Clobules Mimicking the Morphology and Polymerase Activity of Metalloenzymes. Macromolecular Rapid Communications, 2015, 36, 1592-1597. | 3.9 | 52 |
| 62 | Collective dynamics of glass-forming polymers at intermediate length scales. EPJ Web of Conferences, 2015, 83, 01001. | 0.3 | 8 |
| 63 | How Composition Determines the Properties of Isodimorphic Poly(butylene) Tj ETQq1 10.784314 rg Crystalline Random Copolymers. Macromolecules, 2015, 48, 43-57. | $\begin{gathered} 10 \mathrm{Tt} \\ 4.8 \end{gathered}$ |  |

Crystalline Random Copolymers. Macromolecules, 2015, 48, 43-57.

Nanostructuration by Self-Assembly in <i>N</i>-Alkyl Thiazolium and Triazolium Side-Chain
64 Polymethacrylates. Macromolecules, 2015, 48, 7180-7193.
$4.8 \quad 20$

| 65 | DETERMINATION OF FILLER STRUCTURE IN SILICA-FILLED SBR COMPOUNDS BY MEANS OF SA Rubber Chemistry and Technology, 2015, 88, 690-710. | 1.2 | 11 |
| :---: | :---: | :---: | :---: |
| 66 | Influence of Solvent on Poly(2-(Dimethylamino)Ethyl Methacrylate) Dynamics in Polymer-Concentrated Mixtures: A Combined Neutron Scattering, Dielectric Spectroscopy, and Calorimetric Study. Macromolecules, 2015, 48, 6724-6735. | 4.8 | 16 |
| 67 | Efficient Route to Compact Single-Chain Nanoparticles: Photoactivated Synthesis via Thiolấ ${ }^{\text {" }}$ Coupling Reaction. Macromolecules, 2014, 47, 8270-8280. | 4.8 | 77 |

68 Effect of polar solvents on the crystalline phase of polyamides. Polymer, 2014, 55, 2867-2881.
$3.8 \quad 17$

> Collective Features in Polyisobutylene. A Study of the Static and Dynamic Structure Factor by
> Molecular Dynamics Simulations. Macromolecules, 2014, 47, 447-459.
$4.8 \quad 15$

Microscopic Dynamics in Nanocomposites of Poly(ethylene oxide) and Poly(methyl methacrylate) Soft
Nanoparticles: A Quasi-Elastic Neutron Scattering Study. Macromolecules, 2014, 47, 304-315.

How Far Are Single-Chain Polymer Nanoparticles in Solution from the Globular State?. ACS Macro
Letters, 2014, 3, 767-772.

Metallo-Folded Single-Chain Nanoparticles with Catalytic Selectivity. ACS Macro Letters, 2014, 3,
439-443.

Component dynamics in nanostructured PI-PDMS diblock copolymers with PI segregated in lamellas, cylinders, and spheres. Colloid and Polymer Science, 2014, 292, 1863-1876.
2.1

13

Dynamic study of polystyrene-block-poly(4-vinylpyridine) copolymer in bulk and confined in cylindrical nanopores. Polymer, 2014, 55, 4057-4066.

Endowing Single-Chain Polymer Nanoparticles with Enzyme-Mimetic Activity. ACS Macro Letters, 2013, 2, 775-779.

Modeling the collective relaxation time of glass-forming polymers at intermediate length scales:
Application to polyisobutylene. Journal of Chemical Physics, 2013, 139, 044906.
3.0

Recent progress on polymer dynamics by neutron scattering: From simple polymers to complex materials. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 87-113.
2.1

Advantages of Orthogonal Folding of Single Polymer Chains to Soft Nanoparticles. Macromolecules,
2013, 46, 9748-9759.
â€œMichaelâ€•Nanocarriers Mimicking Transient-Binding Disordered Proteins. ACS Macro Letters, 2013, 2, 491-495.

Effect of Nanoconfinement on Polymer Dynamics: Surface Layers and Interphases. Physical Review
Letters, 2013, 110, 108303.

Dynamics of Poly(butylene oxide) Well above the Class Transition. A Fully Atomistic Molecular Dynamics Simulation Study. Macromolecules, 2013, 46, 1678-1685.

Design and Preparation of Singleâ€Chain Nanocarriers Mimicking Disordered Proteins for Combined
Delivery of Dermal Bioactive Cargos. Macromolecular Rapid Communications, 2013, 34, 1681-1686.

Applicability of mode-coupling theory to polyisobutylene: A molecular dynamics simulation study.
Physical Review E, 2013, 88, 042302.

Publisherâ $€^{T M}$ s Note: Effect of Nanoconfinement on Polymer Dynamics: Surface Layers and Interphases
[Phys. Rev. Lett. <b>110</b>, 108303 (2013)]. Physical Review Letters, 2013, 110, .

Nanophase Separation and Exotic Dynamic Behavior in Comb-Like Polymers. Journal of the Physical Society of Japan, 2013, 82, SA015.

Quasielastic Neutron Scattering Study on the Dynamics of Poly(alkylene oxide)s. Macromolecules,
2012, 45, 4394-4405.

Unexpected PDMS Behavior in Segregated Cylindrical and Spherical Nanophases of PSâ€"PDMS
Asymmetric Diblock Copolymers. Macromolecules, 2012, 45, 491-502.
4.8

Short and Intermediate Range Order in Poly(alkylene oxide)s. A Neutron Diffraction and Molecular
Dynamics Simulation Study. Macromolecules, 2012, 45, 7293-7303.
4.8

Study of the structure and dynamics of poly(vinyl pyrrolidone) by molecular dynamics simulations
100 validated by quasielastic neutron scattering and x-ray diffraction experiments. Journal of Chemical
Atomic motions in poly(vinyl methyl ether): A combined study by quasielastic neutron scattering and
107 molecular dynamics simulations in the light of the mode coupling theory. Journal of Chemical

Neutron scattering study of the dynamics of a polymer melt under nanoscopic confinement. Journal of Chemical Physics, 2009, 131, 174901.

111 Study of the dynamics of poly(ethylene oxide) by combining molecular dynamic simulations and neutron scattering experiments. Journal of Chemical Physics, 2009, 130, 094908.

Atomic motions in the $\hat{l} \pm \hat{\imath} 2$-merging region of 1,4 -polybutadiene: A molecular dynamics simulation study. Journal of Chemical Physics, 2008, 128, 224905.
$3.0 \quad 24$
115 Neutron scattering investigation of a diluted blend of poly(ethylene oxide) in polyethersulfone. Journal of Chemical Physics, 2008, 128, 184901.

```117 Atomic motions in the \(\hat{I}_{ \pm} \hat{I}^{2}\)-region of glass-forming polymers: molecular versus mode coupling theory
Phenylene ring dynamics in phenoxy and the effect of intramolecular linkages on the dynamics of 051801.
\(2.1 \quad 8\)

120 Segmental dynamics in miscible polymer blends: recent results and open questions. Soft Matter, 2007,
2.7

159

\section*{120 3, 1474.}
4.8

41
Dynamic Confinement Effects in Polymer Blends. A Quasielastic Neutron Scattering Study of the Slow
Component in the Blend Poly(vinyl acetate)/Poly(ethylene oxide). Macromolecules, 2007, 40, 4568-4577.
Quasielastic Neutron Scattering Study on the Effect of Blending on the Dynamics of Head-to-Head
4.8

34
Poly(propylene) and Poly(ethyleneâ̂’propylene). Macromolecules, 2006, 39, 1060-1072.
Dynamic Confinement Effects in Polymer Blends. A Quasielastic Neutron Scattering Study of the
123 Dynamics of Poly(ethylene oxide) in a Blend with Poly(vinyl acetate). Macromolecules, 2006, 39,
\(4.8 \quad 56\)
3007-3018.
Local Structure of Syndiotactic Poly(methyl methacrylate). A Combined Study by Neutron Diffraction
124 with Polarization Analysis and Atomistic Molecular Dynamics Simulations. Macromolecules, 2006, 39, 3947-3958.

Self- and Collective Dynamics of Syndiotactic Poly(methyl methacrylate). A Combined Study by
125 Quasielastic Neutron Scattering and Atomistic Molecular Dynamics Simulations. Macromolecules,
Dynamics of Polyethersulfone Phenylene Rings:ÂA Quasielastic Neutron Scattering Study.
Macromolecules, 2005, 38, 3999-4013. \(\quad\)\begin{tabular}{l} 
Partial Structure Factors in 1,4-Polybutadiene. A Combined Neutron Scattering and Molecular \\
Dynamics Simulations Study. Macromolecules, 2005, 38, 9847-9853.
\end{tabular}
134 Neutron Spin Echo in Polymer Systems, Chapter 1., 2005, , 1-221.33
135 Hydrogen motions in the \(\hat{\mathrm{I}} \pm\)-relaxation regime of poly(vinyl ethylene): A molecular dynamics simulation and neutron scattering study. Journal of Chemical Physics, 2004, 121, 3282-3294. 3.0 ..... 26
Phenylene ring dynamics in bisphenol-A-polysulfone by neutron scattering. Journal of Chemical\(136 \begin{aligned} & \text { Phenylene ring dynamics in bisp } \\ & \text { Physics, 2004, 120, 423-436. }\end{aligned}\)
3.0 ..... 20
137 Direct observation of the crossover from \(\hat{ \pm} \pm\)-relaxation to Rouse dynamics in a polymer melt. Europhysics Letters, 2004, 66, 239-245. ..... 23
Hydrogen motions and the \(\hat{l}_{ \pm}\)-relaxation in glass-forming polymers: Molecular dynamics simulation and1.813
quasi-elastic neutron scattering results. Pramana - Journal of Physics, 2004, 63, 25-32.Crossover from Rouse dynamics to the \(\hat{l} \pm\)-relaxation in poly (vinyl ethylene). Pramana - Journal of

Condensed Matter, 2004, 350, E881-E884.
145 Dynamics of glass-forming polymers. Physica B: Condensed Matter, 2004, 350, 178-185. 2.7
\(147 \quad\)\begin{tabular}{l} 
Intermediate length scale dynamics in glass forming polymers: coherent and incoherent quasielastic \\
neutron scattering results on polyisobutylene. Chemical Physics, 2003, 292, 295-309.
\end{tabular}

148 Experimental evidence by neutron scattering of a crossover from Gaussian to non-Gaussian behavior
2.1
Self-motion and the Â-relaxation in glass-forming polymers. Molecular dynamic simulation and
149 quasielastic neutron scattering results in polyisoprene. Journal of Physics Condensed Matter, 200
151 Non-Gaussian Nature of thê̂̀ Relaxation of Glass-Forming Polyisoprene. Physical Review Letters, 2002,
\(89,245701\). 7.8 ..... 92152 Heterogeneous structure of poly(vinyl chloride) as the origin of anomalous dynamical behavior.Journal of Chemical Physics, 2002, 117, 1336-1350.
153 Self-motion and the \(\hat{\text { l̂}} \pm\) relaxation in a simulated glass-forming polymer: Crossover from Gaussian to non-Gaussian dynamic behavior. Physical Review E, 2002, 65, 041804. ..... \(2.1 \quad 121\)
Partial structure factors of a simulated polymer melt. Computational Materials Science, 2002, 25, 596-605.

\(3.0 \quad 5\)
155 Component dynamics in polymer blends: a combined QENS and dielectric spectroscopy investigation.
Applied Physics A: Materials Science and Processing, 2002, 74, s442-s444.7
Neutron scattering on partially deuterated polybutadiene. Applied Physics A: Materials Science and
156 Processing, 2002, 74, s371-s373.

\(2.3 \quad 3\)Secondary relaxation in two engineering thermoplastics by neutron scattering and dielectricspectroscopy. Applied Physics A: Materials Science and Processing, 2002, 74, s454-s456.
\(2.3 \quad 8\)
158 Experimental aspects of polymer dynamics. Polymer International, 2002, 51, 1211-1218.3.13
159 Merging of the Dielectric \(\hat{l} \pm\) and \(\hat{\imath}^{2}\) Relaxations in Class-Forming Polymers. Macromolecules, 2001, 34, ..... 4.8 ..... 77
503-513.
\begin{tabular}{|c|c|c|c|}
\hline 163 & Fast dynamics in poly(vinyl chloride) below the glass transition: self and pair correlation functions. Physica B: Condensed Matter, 2000, 276-278, 440-441. & 2.7 & 1 \\
\hline 164 & Methyl group dynamics above the glass transition temperature: a molecular dynamics simulation in polyisoprene. Chemical Physics, 2000, 261, 47-59. & 1.9 & 22 \\
\hline 165 & Origin of Dynamic Heterogeneities in Miscible Polymer Blends: A Quasielastic Neutron Scattering Study. Physical Review Letters, 2000, 85, 772-775. & 7.8 & 59 \\
\hline 166 & Space time observation of the -process in polymers by quasielastic neutron scattering. Journal of Physics Condensed Matter, 1999, 11, A297-A306. & 1.8 & 22 \\
\hline 167 & On the origin of the non-exponential behaviour of the -relaxation in glass-forming polymers: incoherent neutron scattering and dielectric relaxation results. Journal of Physics Condensed Matter, 1999, 11, A363-A370. & 1.8 & 50 \\
\hline 168 & Arbeet al.Reply:. Physical Review Letters, 1999, 82, 1336-1336. & 7.8 & 19 \\
\hline 169 & Reply to â€œComment on â€ Merging of the \(\hat{l}_{ \pm}\)and \(\hat{\imath}^{2}\) relaxations in polybutadiene:â€fA neutron spin echo and dielectric studyâ \(€^{\text {TM }}\) â€: Physical Review E, 1999, 60, 1103-1105. & 2.1 & 31 \\
\hline 170 & From Rouse dynamics to local relaxation: A neutron spin echo study on polyisobutylene melts. Journal of Chemical Physics, 1999, 111, 6107-6120. & 3.0 & 78 \\
\hline 171 & Segmental Dynamics in Poly(vinylethylene)/Polyisoprene Miscible Blends Revisited. A Neutron Scattering and Broad-Band Dielectric Spectroscopy Investigation. Macromolecules, 1999, 32, 7572-7581. & 4.8 & 104 \\
\hline 172 & Fast-dynamics in plasticized poly(vinyl chloride). Journal of Non-Crystalline Solids, 1998, 235-237, 169-172. & 3.1 & 6 \\
\hline 173 & Investigation of the Dielectric \(\hat{2}\)-Process in Polyisobutylene by Incoherent Quasielastic Neutron Scattering. Macromolecules, 1998, 31, 4926-4934. & 4.8 & 44 \\
\hline 174 & Molecular Motions in Polyisobutylene:Â A Neutron Spin-Echo and Dielectric Investigation. Macromolecules, 1998, 31, 1133-1143. & 4.8 & 110 \\
\hline 175 & Dynamics of Class-Forming Polymers: â€œHomogeneousâ€•versus â€œHeterogeneousâ€.Scenario. Physical Review Letters, 1998, 81, 590-593. & 7.8 & 160 \\
\hline
\end{tabular}

176 Carbon-carbon torsional barriers driving the fast dynamics in glass-forming polymers. Physical

Merging of the \(\hat{I} \pm\) and \(\hat{\imath}^{2}\) relaxations in polybutadiene: A neutron spin echo and dielectric study. Physical

188 Correlation between non-Debye behavior andQbehavior of the \(\hat{I} \pm\) relaxation in glass-forming polymeric systems. Physical Review Letters, 1992, 69, 478-481.```

