

Publications du service "Service de Physique des Nanomatériaux et Energie"

2023

Périodiques scientifiques/Article

- Tran, V. D., Truong, H.-C., Nguyen, T. V., Leclère, P., Duong, T.-T., Bui, T. H., & Nguyen, V. Q. (December 2023). Piezoelectric responses of PVDF-KBT electrospun nanocomposite fibres via nanoscale mapping. "Ceramics International, 49" (23), 38288 - 38296. doi:10.1016/j.ceramint.2023.09.161
Texte intégral : [199-Ceramics_International_2023.pdf](#) (Accès libre)
- Vinx, N., Tromont, D., Chauvin, A., LECLERE, P., Snyders, R., & Thiry, D. (31 October 2023). Designing Nanostructured Organic-Based Material by Combining Plasma Polymerization and the Wrinkling Approach. "Langmuir, 39" (43), 15231 - 15237. doi:10.1021/acs.langmuir.3c01873
Texte intégral : [200-Langmuir_2023 Nathan.pdf](#) (Accès libre)
- Vinx, N., Leclère, P., Poleunis, C., Delcorte, A., Mathieu, P., Cossement, D., Snyders, R., & Thiry, D. (2023). The influence of the substrate temperature on the growth mechanism of amine- and thiol-based plasma polymers: A comparative study. "Plasma Processes and Polymers". doi:10.1002/ppap.202300138
Texte intégral : [The influence of the substrate temperature on the growth mechanism of amine- and thiol-based plasma polymers - A comparative study.pdf](#) (Accès libre)
- Siniscalco, D., Pessoni, L., Billon, L., Boussonnière, A., Castanet, A.-S., Bardeau, J.-F., Nickmilder, P., Leclère, P., & Delorme, N. (08 September 2023). Measurement of the Transition Temperature Governing the Photoinduced Reversible Solid-to-Liquid Transition of Azobenzene-Containing Polymers. "ACS Applied Polymer Materials, 5" (9), 7358 - 7363. doi:10.1021/acsapm.3c01256
Texte intégral : [siniscalco-et-al-2023-measurement-of-the-transition-temperature-governing-the-photoinduced-reversible-solid-to-liquid.pdf](#) (Accès libre)
[ap3c01256_si_001.pdf](#) (Accès libre)
- Tilbury, M. A.* , Tran, T. Q.* , Shingare, D., Lefevre, M., Power, A. M., Leclère, P.* , & Wall, J. G.* . (August 2023). Self-assembly of a barnacle cement protein into intertwined amyloid fibres and determination of their adhesive and viscoelastic properties. "Journal of the Royal Society, Interface, 20" (205), 20230332. doi:10.1098/rsif.2023.0332
Texte intégral : [197-J_of_Royal_Society_Interface_2023.pdf](#) (Accès libre)
- De muijlder, T., Voué, M., & Leclère, P. (10 June 2023). Laser Ablation Synthesis of Silver Nanoparticles for Polymer Nanocomposites. "Energies, 16" (12), 4625. doi:10.3390/en16124625
Texte intégral : [energies-16-04625.pdf](#) (Accès libre)
- Sambo, M. M., Kindo, A., Bougouma, M., Soma, F., Sorgho, A., Conti, G., & Leclère, P. (2023). Temperature effect on zinc electrodeposition in choline chloride-urea deep eutectic solvent. "Mediterranean Journal of Chemistry".
Texte intégral : [196-Med J of Chemistry_2023.pdf](#) (Accès libre)

Colloques et congrès scientifiques/Communication orale non publiée/Abstract

- Leclère, P. (31 October 2023). "Machine Learning for Polymeric Nanomechanical Properties Characterization by Dynamic AFM Modes" [Paper presentation]. 2023 Benelux Bruker Users Meeting, Eindhoven, Netherlands.
- Leclère, P. (October 2023). "Towards the Quantitative Mapping of the Mechanical and Viscoelastic Properties of Materials by Dynamic Scanning Probe Microscopy: beyond the Observables !" [Paper presentation]. JEPO 2023 – 50èmes Journées d'Etudes des Polymères, Le Val Joly, France.
- Leclère, P. (05 September 2023). "On the mapping of the electrical properties of materials at the nanoscale: the key role of scanning probe microscopy" [Paper presentation]. FEMS Euromat 2023.
- Leclère, P. (September 2023). "Towards the Quantitative Mapping of the Mechanical and Viscoelastic Properties of Materials by Dynamic Scanning Probe Microscopy: beyond the Observables!" [Paper presentation]. The 20th International Microscopy Congress (IMC20), Busan, South Korea.
- Leclère, P. (01 June 2023). "On the quantitative mapping of the mechanical and electrical properties of materials at the nanoscale : the key role of scanning probe microscopy" [Paper presentation]. ComplexSurf Day.

- Leclère, P. (17 May 2023). "Scanning probe microscopy for energy applications" [Paper presentation]. SIREVIVAL Workshop: Energy Materials and Technologies.
- Nickmilder, P., Leclère, P., Yang Lanti, & De muijlder, T. (07 April 2023). "Study of the mechanical and viscoelastic properties of complex heterogeneous polymeric systems at the nanoscale and automated population identification" [Paper presentation]. Forum des microscopie à sonde locale, Obernai, France.
Texte intégral : [Forum 2023-V def.pdf](#) (Accès libre)
- Leclère, P. (2023). "Nanoscale Electrical Investigation of Transparent Conductive Electrodes Based on Silver Nanowire Network" [Paper presentation]. Webinaire C'Nano de l'axe thématique nanométrie électrique.
- Leclère, P. (2023). "Révéler le nanomonde grâce à la microscopie à force atomique !" [Paper presentation]. Forum des Microscopie à Sonde Locale 2023.

Colloques et congrès scientifiques/Communication poster

- Nickmilder, P., Schmidt, E., Lefèbre, M., Chambrier, M.-H., Da Costa, A., Ferri, A., Desfeux, R., & Leclère, P. (28 November 2023). "On the electro-mechanical Property Characterization of piezoelectric inorganic and hybrid material for energy harvesting systems" [Poster presentation]. MRS Fall Meeting 2023.
- Tran, T. Q., Zuttion, F., Portal, J., Valero, V., Leclère, P., & Luengo, G. (September 2023). "Nanoscale viscoelastic properties of acrylate copolymers as model systems for next-generation cosmetic bio-sourced materials" [Poster presentation]. 37th Conference of the European Colloid & Interface Society (ECIS 2023), Naples, Italy.
- Nickmilder, P., Mathurin, J., Dazzi, A., & Leclère, P. (27 June 2023). "Study of the mechanical, viscoelastic, and chemical properties of polymer blend-based thin films by dynamic atomic force microscopy" [Poster presentation]. First EUNICE Workshop for Multi-Functional Materials : From Synthesis to Applications.
- De Muijlder, T., & Leclère, P. (June 2023). "Towards quantitative mapping of physical and chemical properties of materials using unsupervised data clustering methods" [Poster presentation]. First EUNICE Workshop for Multi-Functional Materials : From Synthesis to Applications, Valenciennes, France.
- Ben Khaled, I., Dogheche, K., Leclère, P., Remiens, D., & Dogheche, E. H. (June 2023). "Synthesis and Piezoelectric Analysis of non-doped ZnO nanowires grown by hydrothermal technique" [Poster presentation]. First EUNICE Workshop for Multi-Functional Materials : From Synthesis to Applications, Valenciennes, France.
- Tran, T. Q., Zuttion, F., Portal, J., Valero, V., Leclère, P., & Luengo, G. (June 2023). "Nanoscale viscoelastic properties of acrylate copolymers as model systems for next-generation cosmetic bio-sourced materials" [Poster presentation]. First EUNICE Workshop for Multi-Functional Materials : From Synthesis to Applications, Valenciennes, France.
- Tran, T. Q., Zuttion, F., Portal, J., Valero, V., Leclère, P., & Luengo, G. (April 2023). "Nanoscale viscoelastic properties of acrylate copolymers as model systems for next generation cosmetic biosourced materials" [Poster presentation]. Forum des Microscopie à Sonde Locale 2023, Obernai, France.
- De Muilder, T., & Leclère, P. (March 2023). "Amélioration de la qualité des mesures de microscopies à sonde locale par apprentissage automatique supervisé" [Poster presentation]. Forum des Microscopie à Sonde Locale 2023, Obernai, France.
- Nickmilder, P., Leclère, P., Mathurin, J., & Dazzi, A. (31 January 2023). "Study of the mechanical, viscoelastic, and chemical properties of polymer blendbased thin films by dynamic atomic force microscopy" [Poster presentation]. EDT-MAIN PhD Scientific Day / NanoWal annual meeting, Namur, Belgium.
- Pham, S. H., Ferri, A., Da Costa, A., Saj Mohan, M. M., Tran, V. D., Nguyen, D. C., Viville, P., Lazzaroni, R., Desfeux, R., & Leclère, P. (2023). "Fabrication and Nanoscale Electrical Characterization of Transparent Conductive Electrodes Based on Silver Nanowire Network" [Poster presentation]. First EUNICE Workshop for Multi-Functional Materials : From Synthesis to Applications, Valenciennes, France.

Conférences scientifiques dans des universités ou centres de recherche/Conférence scientifique dans des universités ou centres de recherche

- Leclère, P. (19 October 2023). "Nanoscale Electrical Characterization of Organic and Hybrid Materials for Energy Applications" [Paper presentation]. Séminaire invité, Curitiba, Brazil.
- Leclère, P. (12 April 2023). "Towards the quantitative mapping of the mechanical properties of materials by Dynamic AFM : beyond the observables !" [Paper presentation]. Invited seminar.

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Périodiques scientifiques/Article

- Tran, V. D., Truong, H. C., Bui, C. D., Dao, V. D., Pham, S. H., Leclère, P., Nguyen, D. C., Nguyen, V. Q., & Yoon, S.-G. (06 June 2022). TCO-Free Perovskite Solar Cells in taking advantage of SWCNT/TiO₂ core/shell sponge. "Journal of Science: Advanced Materials and Devices, 7", 100440.
Texte intégral : [193-Journal_of_Science_Advanced_Materials_an_Devices_2022.pdf](#) (Accès libre)
- Tran, Q. H., Chu, D. T., Hoang, V. H., Do, Q. T., Pham, S. H., Leclère, P., Nguyen, T. D., & Nguyen, D. C. (02 May 2022). Enhancement of Electrical and Thermal Properties of Silver Nanowire Transparent Conductive Electrodes by Ag coating. "Materials Science and Engineering: B, Solid-State Materials for Advanced Technology, 278", 115560.
Texte intégral : [192-Mater_Sci_Eng_B_2022.pdf](#) (Accès libre)
- Pham, S. H., Ferri, A., Da Costa, A., Saj Mohan, M. M., Tran, V. D., Nguyen, D. C., Viville, P., Lazzaroni, R., Desfeux, R., & Leclère, P. (2022). Nanoscale electrical investigation of transparent conductive electrodes based on silver nanowire network. "Advanced Materials Interfaces, 7", 2200019.
Texte intégral : [194-Adv Materials Inter - 2022 - Pham.pdf](#) (Accès libre)

Colloques et congrès scientifiques/Communication orale non publiée/Abstract

- Leclère, P. (06 December 2022). "Towards the quantitative measurements of the nanomechanical properties of materials by scanning probe microscopy" [Paper presentation]. GT "Vide et Caractérisation", Villeneuve d'Ascq, France.
- Leclère, P. (30 November 2022). "Towards the quantitative mapping of the mechanical properties of materials by Dynamic AFM : beyond the observables !" [Paper presentation]. Journées des utilisateurs Bruker, Nancy, France.
- Leclère, P. (28 November 2022). "Nanoscale Electrical Characterization of Organic and Hybrid Materials for Energy Applications" [Paper presentation]. MRS 2022 Fall Meeting, Boston, United States.
- De muijlder, T., Voué, M., & Leclère, P. (08 March 2022). "Etude et caractérisation à la nanoéchelle des propriétés électriques et mécaniques de nanoparticules d'argent dispersées dans une matrice de polystyrène" [Paper presentation]. Forum des Microscopies à Sonde Locale 2022, Saint-Valéry-sur-Somme, France.
- De Muijlder, T., & Leclère, P. (2022). "Vers une cartographie quantitative des propriétés physiques et chimiques des matériaux à l'aide de méthodes de regroupement de données non supervisées" [Paper presentation]. Forum2022, Saint-Valery-Sur-Somme, France.
Texte intégral : [Livret Forum 2022_AbstractPyTA.pdf](#) (Accès libre)
- De Muijlder, T., Voué, M., & Leclère, P. (2022). "Study and characterization at the nanoscale of electrical and mechanical properties of silver nanoparticles dispersed in a polystyrene matrix" [Paper presentation]. International Symposium On Polymer Nanocomposites, Lorient, France.
Texte intégral : [ISPN2022_Abstract.pdf](#) (Accès libre)

Colloques et congrès scientifiques/Communication poster

- Pham, S. H., Ferri, A., Da Costa, A., Desfeux, R., & Leclère, P. (08 March 2022). "Electrical properties of flexible transparent electrodes based on silver nanowires" [Poster presentation]. Forum des Microscopies à Sonde Locale 2022, Saint-Valéry-sur-Somme, France.
- Nickmilder, P., Mathurin, J., Dazzi, A., & Leclère, P. (07 March 2022). "Étude des propriétés mécaniques, viscoélastiques et chimiques de films minces de mélanges de polymères" [Poster presentation]. Forum 2022, France.
Texte intégral : [Poster Pierre Nickmilder + PhLe.pdf](#) (Accès libre)[resume forum.pdf](#) (Accès libre)
- De Muijlder, T., Voué, M., & Leclère, P. (2022). "Etude et caractérisation à la nanoéchelle des propriétés électriques et mécaniques de nanoparticules d'argent dispersées dans une matrice de polystyrène" [Poster presentation]. Forum2022, Saint-Valery-Sur-Somme, France.
Texte intégral : [poster Forum final.pdf](#) (Accès libre)[Livret Forum 2022_AbstractND.pdf](#) (Accès libre)

Conférences scientifiques dans des universités ou centres de recherche/Conférence scientifique dans des universités ou centres de recherche

- Leclère, P. (22 November 2022). "Towards the quantitative mapping of the mechanical properties of materials by Dynamic AFM : beyond the observables !" [Paper presentation]. Séminaire à la TUFTS University, Medford, United States.
- Nickmilder, P., Jérémie Mathurin, Alexandre Dazzi, & Leclère, P. (2022). "Étude des propriétés mécaniques, viscoélastiques et chimiques de films minces de mélanges de polymères" [Paper presentation]. Forum 2022.
Texte intégral : [Poster Pierre Nickmilder + PhLe.pdf](#) (Accès libre) [resume forum.pdf](#) (Accès libre)

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Périodiques scientifiques/Article

- Vinx, N., Damman, P., Leclère, P., Bresson, B., Fretigny, C., Poleunis, C., Delcorte, A., Cossement, D., Snyders, R., & Thiry, D. (11 October 2021). Investigating the relationship between the mechanical properties of plasma polymer-like thin films and their glass transition temperature. "Soft Matter, 17" (44), 10032-10041.
Texte intégral : [Investigating_the_relationship_between_the_mechanical_properties_of_plasma_polymer-like_thin_films_and_their_glass_transit.pdf](#) (Accès libre)

Colloques et congrès scientifiques/Communication poster

- Pham, S. H., Ferri, A., Da Costa, A., Tran, V. D., Desfeux, R., & Leclère, P. (30 June 2021). "Electrodeposited silver nanowire network for flexible transparent electrodes" [Poster presentation]. International Scanning Probe Microscopy + International Conference on Scanning Probe Microscopy on Soft and Polymeric Materials - I(SPM)3 2020, Breckenridge, United States.
- Nickmilder, P., Mathurin, J., Dazzi, A., Leclère, P., & Thomas De Muijlder. (29 June 2021). "Study of the mechanical, viscoelastic, and chemical properties of polymer blend-based thin films by dynamic atomic force microscopy" [Poster presentation]. International Scanning Probe Microscopy + International Conference on Scanning Probe Microscopy on Soft and Polymeric Materials - I(SPM)3 2020, Breckenridge, United States.
- Pham, S. H., Ferri, A., Da Costa, A., Desfeux, R., & Leclère, P. (2021). "Electrodeposition of Silver Nanowire-Based Transparent Conductive Flexible Electrode for Organic Light-Emitting Diodes" [Poster presentation]. MRS 2021 Fall Meeting, Boston, United States.

Conférences scientifiques dans des universités ou centres de recherche/Conférence scientifique dans des universités ou centres de recherche

- Leclère, P. (22 November 2021). "On the Mapping of the Mechanical and Viscoelastic Properties of Materials at the Nanoscale" [Paper presentation]. Séminaire (on line), Medford, United States.