Your articles

22 articles submitted

Legend:
- Accept
- Minor revision
- Major revision
- Reject & Resubmit
- Reject

Originality

Structure The article is well structured with clear seperated sections.

Title The title gives a precise idea about the aim of the article.

Abstract The abstract is too general and does not point on no the aim of the article which is the "Reversibility" of lithium plating in Li-ion batteries.

Introduction The introduction not only describes well the general context but it also focuses on the particular main interest of the research.

Method The writer tried to describe in details the method in the article. However the method's procedures are not clearly and meaningfully ordered.

Results The results section is well developed. However the discussion is not conducted in an optimized logical sequence.

Conclusion/Discussion The conclusion resumes the optimized results that were found and the corresponding discussion.

Language Despite some grammatical errors which exist in the article, the general language in which the article is written is clearly understandable.

Figures and Tables The figures of the article are well described in the text but the titles could be d in more detailed.

Citations and References

Ethical Issues No i don't have such suspects.

Comments to the author

Comments to the editor

Your recommendation Minor revision required

Introduction Good introduction with minor reviews. State of the art and narrowing the scope to the paper topic is OK. Need to clearly state what the problem you are addressing ; is it a lack of model that need to be filled or a lack of data about thermomechanical mortarless masonry ?

Correction :
1) First sentence is repetition from abstract –> avoid. Moreover, in 2d paragraph, no need to repete the drawback of micromodelling.
2) "... it is ONLY suitable for small sized structures" or even better "... not suitable for large sized structures" as you are speaking about drawback."

Method Very well written method with enough information about the data collection (it seems reproducible) and the procedure to follow (good description of equipment). For a more comprehensive method, the author should improve his description of equations and parameters used in them and link his work with references. Moreover, the author should insist on the procedure order. Corrections :
1) Add reference and version of the different softwares used.
2) see figure review.

Results Results need thorough revision, especially the second paragraph where the information are not complete and clear, put in an ilogical sequence. The author is mixing results with method and discussion, resulting in an intelligible section. It is preferrable to isolate the discussion from the results as the discussion is the core of a study. Interpretation must be separated from results. For instance, the first paragraph must be in Method, it describes only the apparatus without showing related results. Paragraphs 3 and 4 are far better, presenting results more comprehensible without interfering with method.

Correction :
1) first paragraph, no "thank to...", write preferentially "by".
2) 2d paragraph, "...until..." instead of "...till..."
3) last sentence should be rewritten to be clearer: "this can be attributed to that..."
4) Figure 4 lacks explanation.

Bear in mind that I am not comfortable with the detailed results of the study.

Conclusion/Discussion Discussion is merged with results but need to be extended. The article is missing the part where the author can discuss his results with other studies and highlight what is new.

The conclusion is short and synthetised the obtained results as well as showing what progress has been made. Improvement can be made concerning the perspectives (the authours shows none) and discussion of the key findings. What is the "take home" message ?

Language The language is very well used with little to no grammatical or spelling mistakes. Some sentences (highlighted in other sections) are difficult to understand but does not disrupt the overall comprehension of the article.

Figures and Tables Figures informs well and show the most important part of the paper, as well as describing the data accurately. Some graphs are not easy to understand ; the legend/figure caption needs to better detail the graph. Figure caption is as large as title, –> reduce font size. No need for colours. All figures are consistent and readible.

Correction :
1) figure 1: Add explanation for equation and arrows
2) figure 2 : t1 and t2 are not readible
3) table 1 : enlarge first column ("state" instead of "stat–e")

5) figure 4 : not comprehensive, add desicrption for "state".
6) figure 5 and 6 : merge them with A and B labels. Axis in bold and if they are the same from one fig to another, use the same name (either Load or Force) and same scale (KN or N).

Citations and References The paper is enough referenced and science is build upon solid previous research. Supplements can be accessed easily. The discussion must be enhance by contrasting author's work with relative studies.

Ethical Issues The reviewer declares that he has no susciption.

Comments to the author "Good job. I enjoy reading your paper and find in it interesting science. You will find following my minor corrections about the form of your paper.

Correction (intro) :
1) First sentence is repetition from abstract –> avoid. Moreover, in 2d paragraph, no need to repete the drawback of micromodelling.
2) "... it is ONLY suitable for small sized structures" or even better "... not suitable for large sized structures" as you are speaking about drawback.

Correction (results) :
1) first paragraph, no "thank to...", write preferentially "by".
2) 2d paragraph, "...until..." instead of "...till..."
3) last sentence should be rewritten to be clearer: "this can be attribuated to that..."
4) Figure 4 lacks explanation.

Correction (figures) :
1) figure 1: Add explanation for equation and arrows
2) figure 2 : t1 and t2 are not readible
3) table 1 : enlarge first column ("state" instead of "stat–e")
4) figure 3 : center the text in the box
5) figure 4 : not comprehensive, add desicrption for "state".
6) figure 5 and 6 : merge them with A and B labels. Axis in bold and if they are the same from one fig to another, use the same name (either Load or Force) and same scale (KN or N)."
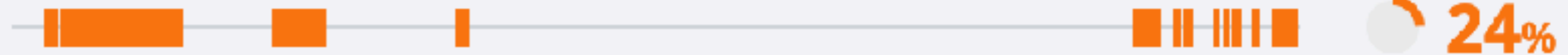
Comments to the editor Paper is well written and can be accepted with minor revisions. The major drawback is the form, structure and content of the result and discussion section. All corrections are meant for the author. I enjoy reading and review this paper.

Your recommendation Minor revision required

Plagiarism and use of AI

This is what a screening by *Compilatio* reveals

Common issues

Check official affiliation and address

[1]INSA Center Val de Loire, Univ. Orléans, PRISME EA 4229, F-18022 Bourges, France

Univ. Orlans PRISME EA 4229, 63 avenue de Lattre de Tassigny, 18020 Bourges, France

INSA CVL, University of Orléans, PRISME Laboratory, EA 4229, F18022 Bourges, France

Putting your exact affiliation is important for your institution to keep track of publications

A high temperature neopentane oxidation kinetic mechanism was developed and tested against an experimental data set of neopentane oxidation obtained using a jet-stirred reactor under 1 atm at temperatures of 1050-1100 K at 0.6-0.24 s residence time and three equivalence ratios of 0.5-2. The mechanism was developed based on an already existed mechanism in literature, which was built with a focus on low temperature neopentane oxidation. The important reactions for high temperature oxidation were identified and adjusted in neopentane submechanism, as well as in the core mechanism. The resulting enhanced mechanism was found to perform better than the original mechanism at different conditions.

Make inspiring texts and provide clear outlooks at the end

Your reviews

Annotating the manuscript directly also helps but is less common

a) Diterpenoids

Preferably increased font size, & bold heading

Phytol (the chlorophyll-α molecule), as a most important acyclic diterpenoid, can be found in many other chlorophylls. In addition, dihydrophytol (or phytanol), which is a saturated analogue of phytol acting as an intermediate in the biosynthesis of phytanic acid, is present in a variety of bacterial glyceride lipid ether (Killops & Killops, 2005). Most diterpenoids are di- and tricyclic compounds, and are particularly common in higher plants. In particular, they are easily found in resins of gymnosperms (e.g. conifers). Therefore, these compounds are considered to be widely distributed biomarkers in recent sediments, coals, oils, peats, amber and fossil resins (Ellis et al., 1996; Kopaczyk et al., 2020; Otto et al., 2002; Otto et al., 2005; Otto & Wilde, 2001; Pereira & Rostad, 1983; Tavendale et al., 1997a; Tavendale et al., 1997b).

b) Triterpenoids

Needs to be spaced, big, & bold font.

As a ubiquitous component in organisms (e.g., shark oil, vegetable oils, fungi), most triterpenoids are proven to use biosynthetic enzymes from the acyclic squalene isoprenoids (Bianchi & Canuel, 2011; Connolly, 1971; Sell, 2003). Most triterpenoids are either pentacyclic or tetracyclic (Killops & Killops, 2005). Unlike tetracyclic triterpenoids, which mainly belong to the important class of compounds, steroids, distributing widely in plants, animals, fungi and bacteria (Bird et al., 1971; Harvey et al., 2006; Písová & Souček, 1973; Ruzicka et al., 1953; Ruzicka et al., 1959; Summons et al., 1999; van Graas et al., 1982; Weete, 1973), most of the pentacyclic triterpenoids with an E at 6 ring carbons which are of higher plant origin where they function as resins in higher plants (Bianchi, 2007; Killops & Frewin, 1994; Ogihara et al., 1987; Rowe, 1964; Tsuda et al., 1964; Walpes & Machihara , 1991). On the other hand, hopanoids possessing a five-carbon E ring are often called bacterio-hopanoids because they are common components of cell membranes of eubacteria, in particular diploptene, diplopterol (Inglis et al., 2018; Ourisson et al., 1979; Ourisson et al., 1982; Ourisson et al., 1987; Rohmer et al. 1992), bacterio-hopanetetrol and aminobacteriohopanetriol (Huang et al., 2015; Innes et al., 1997; Kannenberg & Poralla 1999; Pancost et al., 2003; Sinninghe Damsté et al., 1995). Three major series can be distinguished among these plant triterpenoids: the oleanoid, ursanoid and lupanoid series (Killops & Killops, 2005). Like hopanoids, these compounds can have various functional groups and are found in the environment as alcohols, alkenes and alkanes. They can be easily identified by GC-MS using the fragment m/z 191.

Comparison needs more clarification.

Thanks to the contributions of researchers during the 1960s, 1970s and 1980s on organo-geochemical and paleoenvironmental issues (Blumer, 1965; Corbet et al., 1980; Greiner et al., 1976; Hills & Whitehead, 1966; Hills et al. , 1968; Meyers et al., 1984; Rullkötter et al., 1982; Simoneit et al., 1985; ten Haven & Rullkötter, 1988; Trendel et al., 1989; Wakeham et al., 1980 (a); Wakeham et al., al., 1980 (b)), but also benefiting from the development of technical separation, such as HPLC, HPGC and MS (Baas, 1985; Goad & Akihisa, 1997), over the last 40 years, studies of molecular biomarkers extracted from lake and marine sediments as well as from other geological sources, have shifted well towards specific compounds, for example, diterpenoids and triterpenoids, which allowed us our knowledge of their significance, their distribution and their role in the vegetable kingdom.

Adding too many ref. between two sentences disrupts the continuity of the flow thus makes it diff. to get the main idea.

, as they hide……

Although they are relatively stable compared to other molecules (amino acids, acyclic alkanes, sugar, etc.), diterpenoids and triterpenoids undergo alterations during diagenesis. It must be said that these transformations play an unfavorable role by hiding certain information which links these biomarkers to their precursors. However, their molecular structures converted into possessing chemically basic and estimable skeletons have reciprocal advantages of studying the diagenesis and palaeoenvironmental conditions of sediment deposition and the quality of petroleum source rocks (Brassell et al., 1983). Therefore, the interpretation of the signals preserved there is dependent on our ability to decipher them. This review will attempt to discuss the diageneses of diterpenoids, triterpenoids and their derivatives in sedimentary environments of lakes and rivers in order to better understand the conditions during the sedimentation and burial of source organism debris in ecosystems. aquatic non-saline.

aquatic, non-saline ecosystems.

Your review : be explicit

Originality still need to work more about it inorder to publish it

Structure yes

Title yes

Abstract no

Introduction yes

Method yes

Results yes

Conclusion/Discussion yes

Language the english is good

Figures and Tables the captions must be corrected

Citations and References yes

Ethical Issues I don't suspect

This review is worthless !

Be specific and justify

Avant toute chose, nous allons faire un changement de coordonnées qui aura le bon goût de redresser notre parallélogramme.

Language ya sometimes there is a typo but just a little.

To summarize, our analysis of this low frequency pulsars census improve the method for the observations of pulsars under 100 MHz by the reduction of ionospheric and interstellar medium effects on the line of sight. On the 90 observed 37 pulsars have been detected and flux calibrated in all beams. For all of these objects, a shifted location and a corresponding flux have been fitted. To enhance the flux calibration of pulsars at this frequency we should worry of the maximum angular shift due to the ionospheric refraction comparatively to the beam. These results suggest that low frequency flux calibration of pulsars is possible but with a lot of care on the dispersion, the scattering and the ionospheric refraction of the signal.

List of reviews
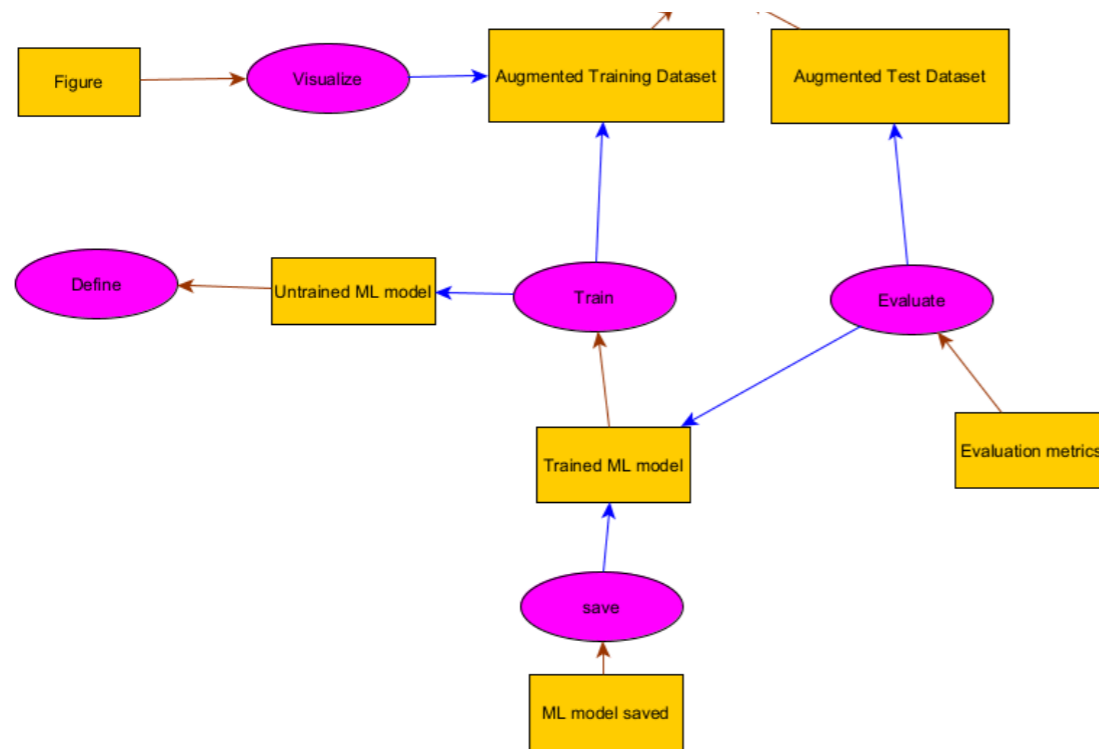
FIGURE 4. Graphique de provenance pour la détection des tumeurs cérébrales

4. PROV-DATAMART

use fonts that are

readable

Confidential comments to the editor J'ai trouvé cela très léger par rapport à ce que j'ai rendu. Je pense que le travail a été fait rapidement, et peut-être fait par de l'IA. J'ai plus eu l'impression de lire un cours sur un langage informatique qu'un article.

Review: Such aspects can be difficult to quantity and are useful for the editor

2. Lola-Lou BAUDRY

5   **Abstract**

6   Intensive research over the last decades led to a reappraisal of magmatic systems beneath oceanic
7 ridges. The classical vision of a melt-dominated magma chamber has been shaken up in favour of
8 crystal-dominated bodies and only minor localized melt-rich lenses. This led to a change in appre-
9 hending melt mobilisation processes at play to feed the extrusive magma flux at mid-oceanic ridges.
10 One explored mechanism is deformation, and how it can lead to the formation of melt-rich and melt-
11 poor areas. This study aims to further constrain the behaviour of a partially molten mafic system
12 (mush).We investigate the parameters and characteristics of deformation-induced melt segregation,
13 and we explore the topology of the liquid and the stress recording through associated microstruc-
14 tures. The starting product is an oceanic gabbro sampled from a "diabase" dyke cored at Atlantis
15 Bank (Southwest Indian Ridge). Partial melting of the gabbro was performed in a Pressure Vessel
16 (IHPV) at 200 MPa to characterize the melt fraction and phases present prior to deformation. We
17 explored temperatures ranging from 1075°C to 1125°C resulting in partial melt ratios comprised
18 between 8 and 20%. Deformation (torsion and compression) experiments on partially molten gab-
19 bros were conducted in a gas-medium apparatus (Paterson press), following the previous results.
20 Results show that the initially homogeneously distributed deformation becomes rapidly overprinted
21 by brittle strain localisation initiating along with melt-rich pockets. With increasing strain, these
22 tensional gashes evolve as transtensional shear bands. High finite strain experiments are in progress
23 to decipher the potential control of strain localisation on melt segregation. This constitutes a sig-
24 nificant lead towards the understanding of the influence of deformation on MOR mafic systems and
25 melt extraction processes.

What would you change ?

1. Introduction

In a molecular or atomistic simulation, the free energy is used to determine the most stable configuration state of an atomic system. To map the energy barriers and meta-stable states of the atomic system.

In a conventional simulation (MD) the system may sometimes remain in a state of minimum free energy for a certain long time before passing an energetic barrier (see Figure 1a). So that makes it difficult to sample all the relevant configurations of the system.

Thus the numerical method Umbrella sampling (US) allows to sample the free energy profile of difficult access states of a system along a reaction coordinate.

Matthews et al, 2017 indicated that this method is very useful when the configuration space of a system presents important energy barriers which impedes the scaling of energy configurations with conventional MD simulation.

✉ fatokhoma.camara@cnrs-orleans.fr (F.A. Camara)
ORCID(s):

Thank you for numbering the lines
Beware of text alignment and acronyms

Burch, J. L., Moore, T. E., Torbert, R. B., & Giles, B. L. (2016, March). Magnetospheric Multiscale Overview and Science Objectives. , *199*(1-4), 5-21. doi: 10.1007/s11214-015-0164-9

Dunlop, M., Southwood, D., Glassmeier, K.-H., & Neubauer, F. (1988). Analysis of multipoint magnetometer data. *Advances in Space Research*, *8*(9), 273-277. Retrieved from `https://www.sciencedirect.com/science/article/pii/027311778890141X` doi: https://doi.org/10.1016/0273-1177(88)90141-X

Dunlop, M. W., & Balogh, A. (2005, March). Magnetopause current as seen by Cluster. *Annales Geophysicae*, *23*(3), 901-907. doi: 10.5194/angeo-23-901-2005

Dunlop, M. W., Dong, X. C., Wang, T. Y., Eastwood, J. P., Robert, P., Haaland, S., … De Keyser, J. (2021, November). Curlometer Technique and Applications. *Journal of Geophysical Research (Space Physics)*, *126*(11), e29538. doi: 10.1029/2021JA029538

Dunlop, M. W., Haaland, S., Escoubet, P. C., & Dong, X. C. (2016, August). Commentary on accessing 3-D currents in space: Experiences from Cluster. *Journal of Geophysical Research (Space Physics)*, *121*(8), 7881-7886. doi: 10.1002/2016JA022668

Grimald, S., Dandouras, I., Robert, P., & Lucek, E. (2012, March). Study of the applicability of the curlometer technique with the four Cluster spacecraft in regions close to Earth. *Annales Geophysicae*, *30*(3), 597-611. doi: 10.5194/angeo-30-597-2012

Klein, K. G., Spence, H., Alexandrova, O., Argall, M., Arzamasskiy, L., Bookbinder, J., … Zweibel, E. (2023, December). HelioSwarm: A Multipoint, Multiscale Mission to Characterize Turbulence. , *219*(8), 74. doi: 10.1007/s11214-023-01019-0

Check your references carefully

Introduction The introduction is well articulated. The author clearly describes the broader context of the research, referencing relevant previous works. It is also interesting to read about the two different multi-point missions, highlighting their importance in space physics studies. The conventional measurement technique is clearly outlined, and its drawbacks are well explained. The proposed technique is well motivated. The author also includes necessary validations in the research, such as comparing the proposed technique with the conventional one, along with the future perspectives.

Review : Listing positive points is good.

Suggestions for improvement are also important

Results "the max currents for nicotine and ACh were 212 ± 0.13 and 56 ± 09 nA+ respectively" - it's not clear why for -212 SD=0,13 and for -56 SD=9. I would ask to send all datas to understand this difference in SD.

"The EC50 for Nicotine was 790 M whereas for ACh, we were not able to calculate it" - Why you couldn't calculate for ACh?

You compare Nicotine and ACh, but why you didn't use statistical methods?

The results are not finished. The statistical analysis is necessary. To present the results as a diagram is recommended. "

Review: beware of special characters that may not always be rendered

Conclusion and Discussion The perspectives are not clear

Review : please be specific
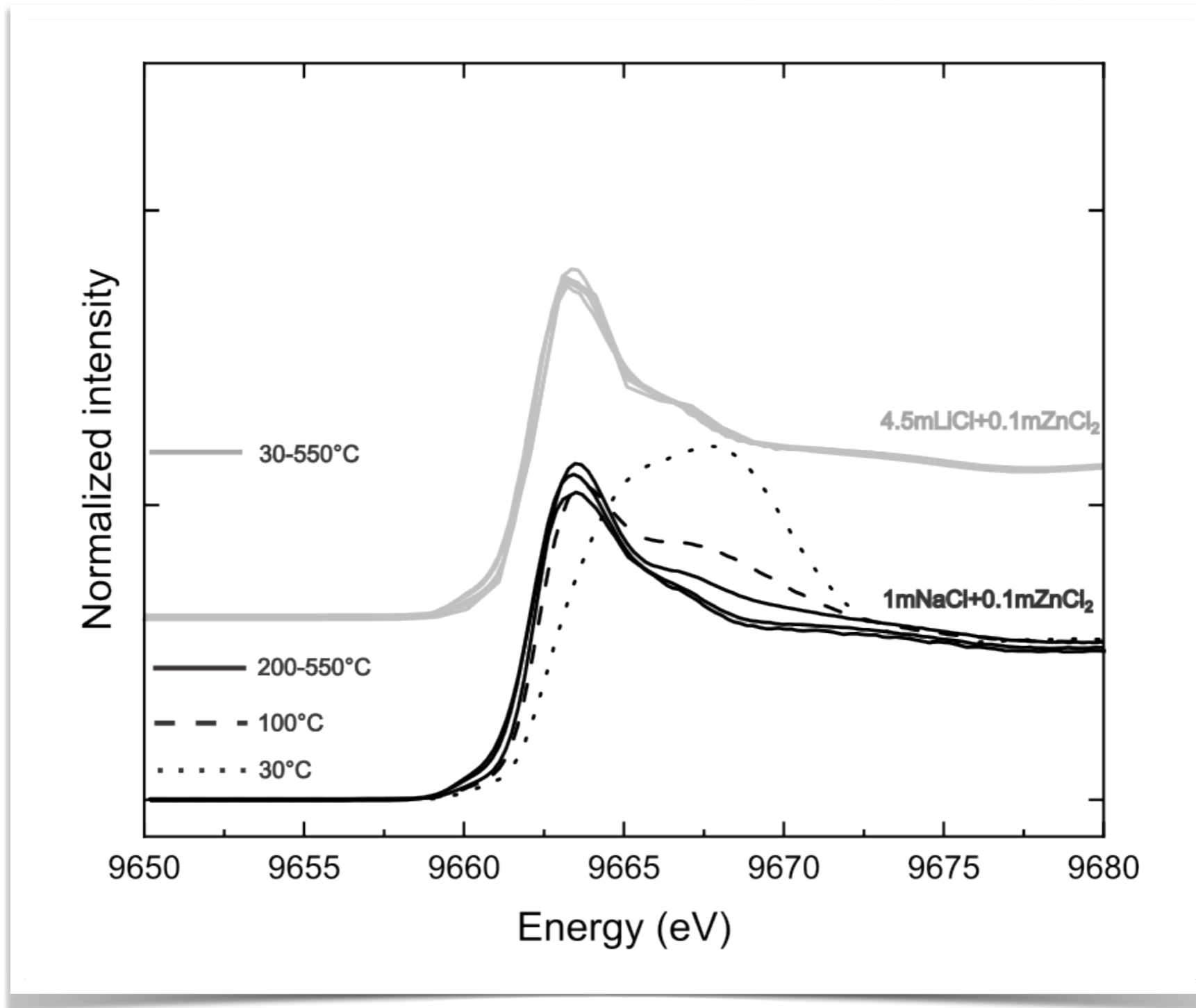
What would you change ?

Comments to the author "Introduction L15: "nano – micrometer sized particles" Remove the space between nano and micrometer: "nano-micrometer-sized particles"

L17: "domains like…" Use "such as" instead of "like"

L28: "is rapidly…" Use "are" instead of "is": "HES solutions … are"

L30: "alow them" One "l" is missing: "allow them"

L33: "once it have" Should be "once it has"

2. Colloid filtration theory L46: "They find finally a close link…" "They finally find a close link…"

Figure 1: No mention of figure 1 in the text

Conclusion L117: No mention of Volume fraction ϕs before?"

Review: such more detailed comments are welcome

Radiation effect considering water addition in laminar hydrogen premixed flame on burning velocity, Lewis number and Markstein length

Vivek Shamrao Chougale
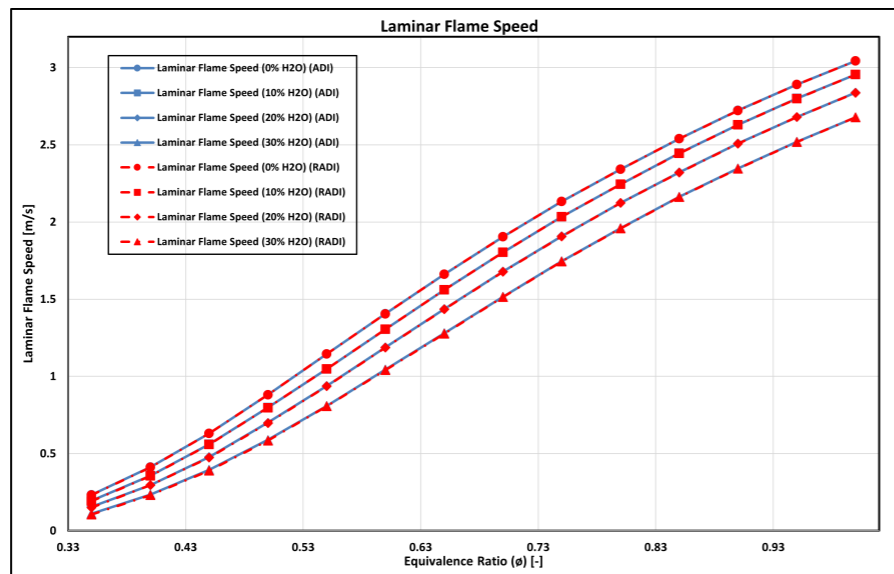Université d'Orléans, PRISME Laboratory, France

Can you rephrase the title ? Focus on the outcome rather than on the method

Your recommendation   Reject and resubmit after major revision
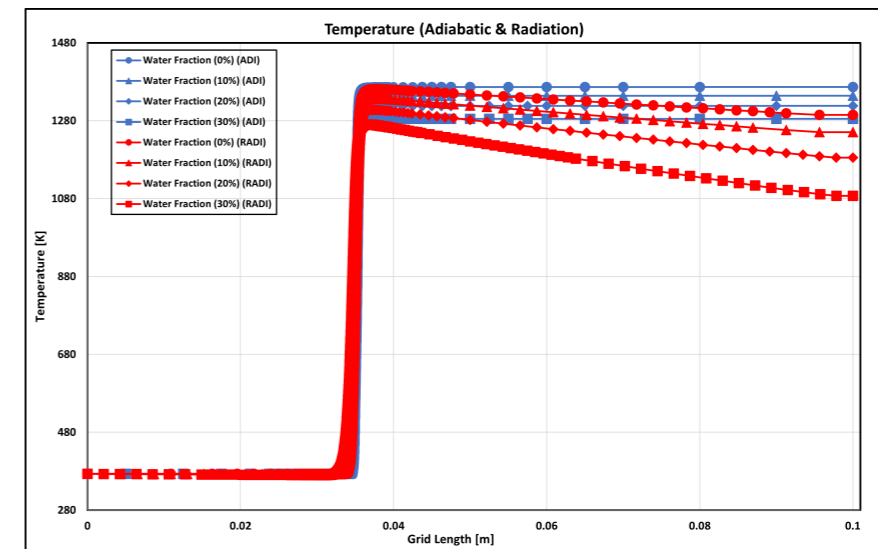
Review was not that critical.

Rejection must then be duly motivated

(a) Laminar flame speed

(b) Adiabatic flame temperature

Figure 1: Laminar flame speed & Adiabatic flame temperature

Beware of font size issues

Confidential comments to the editor I am not at all in the same field as the author with not the same conditions of publication so some of my comments might be too picky or just not appropriate. I want to apologize to the author and the editor if that is the case. Also I felt free to provide some corrections and suggestions directly on the manuscript which I can send later to the author.

Review

A.R Daher,* A. Caillard, and M. Mikikian

GREMI (Groupe de Recherches sur l'Énergétique des Milieux Ionisés) – UMR7344

CNRS / Université d'Orléans, 14 rue d'Issoudun, 45067 Orléans, France.

(Dated: May 19, 2025)

We investigated the reactivity of methane in a low-pressure capacitive coupled RF plasma to monitor the evolution of NPs during a generation cycle and analyze the deposited films in terms of thickness, density, deposition rate, and morphology. A parametric study identified optimal conditions for film deposition and cyclic nanoparticle growth, as a pressure of 0.25 mbar, a power of 80 W, and a methane flow rate of 2.5 sccm. The results show that the size of the nanoparticle increases throughout the generation cycle, reaching a critical diameter of approximately 150 nm before being evacuated from the plasma center. A new generation of particles then forms in the center, while those displaced to the periphery continue to grow, reaching up to 343 nm at the beginning of the next cycle. SEM analysis revealed that the deposited thin films exhibit a smooth and homogeneous morphology. However, deposition is not spatially uniform, the rate of deposition at the center of the electrode is higher than that at the edge (41% greater), and a similar inhomogeneity is observed between the upper and lower electrodes. The deposition density, determined by combining the QCM and SEM measurements, ranges from 1.0 to 1.2 g/cm^3, aligning with values reported in the literature.

What would you change in the abstract ?

Nanoparticles and thin films synthesis in capacitive coupled methane/Argon RF plasma

A.R Daher,[*] A. Caillard, and M. Mikikian

GREMI (Groupe de Recherches sur l'Énergétique des Milieux Ionisés) – UMR7344
CNRS / Université d'Orléans, 14 rue d'Issoudun, 45067 Orléans, France.
(Dated: May 19, 2025)

We investigated the reactivity of methane in a low-pressure capacitive coupled RF plasma to monitor the evolution of NPs during a generation cycle and analyze the deposited films in terms of thickness, density, deposition rate, and morphology. A parametric study identified optimal conditions for film deposition and cyclic nanoparticle growth, as a pressure of 0.25 mbar, a power of 80 W, and a methane flow rate of 2.5 sccm. The results show that the size of the nanoparticle increases throughout the generation cycle, reaching a critical diameter of approximately 150 nm before being evacuated from the plasma center. A new generation of particles then forms in the center, while those displaced to the periphery continue to grow, reaching up to 343 nm at the beginning of the next cycle. SEM analysis revealed that the deposited thin films exhibit a smooth and homogeneous morphology. However, deposition is not spatially uniform, the rate of deposition at the center of the electrode is higher than that at the edge (41% greater), and a similar inhomogeneity is observed between the upper and lower electrodes. The deposition density, determined by combining the QCM and SEM measurements, ranges from 1.0 to 1.2 g/cm^3, aligning with values reported in the literature.

I. INTRODUCTION

Reactive plasmas based on hydrocarbon gases, such as methane, are weakly ionized gases that can contain electrons, neutral and charged molecular species, radicals, and sometimes particles ranging in size from nanometers to micro[1–5]. These reactive plasmas are now widely used for the synthesis of carbon-based materials and nanostructures, which have applications in diverse fields such as optoelectronics, microelectronics, and energy storage [3, 6, 7]. One of the significant challenges in plasma research and a task of significant importance is controlling the growth and transport dynamics of nanoparticles due to the potential applications of these nanoparticles [8–11]. Hydrocarbon plasmas are also commonly used to deposit thin films of diamond and diamond-like carbon (DLC), which are widely used in various industrial applications [12].

When methane is injected into the plasma, numerous complex chemical reactions occur, including dissociation and recombination, producing reactive species such as CH_3, C_2H_2, CH, and C_2 [3, 13]. These processes can lead either to nanoparticle formation in plasma volume or thin-film deposition on surfaces.

In the volume phase, nanoparticle formation occurs in several stages. Initially, hydrocarbon molecules form small clusters (<0.2 nm) [1]. When the density of the cluster reaches a critical point, nucleation begins, resulting in the formation of the first particles. These particles then collide and agglomerate, growing to tens of nanometers in diameter. Later, a slower accretion phase occurs as radicals and ions attach to negatively charged particles [14, 15].

In the plasma core, electrons and ions bombard particles. Since electrons are much lighter than ions ($m_e \ll m_i$) and have higher thermal velocity ($v_{th,e} \gg v_{th,i}$), they dominate the current, and as consequence, the particles acquire a negative charge. At equilibrium, the floating potential reaches $V = -2.5\,kT_e$, balancing ion and electron fluxes ($I_e = I_i$) [2, 14].

The presence of nanoparticles affects the plasma parameters. The electron density drops due to the charge of the particles, while the electron temperature increases, which affects the discharge current [9]. Negatively charged particles experience multiple forces: electrostatic force (F_e) from the plasma field, ion drag pushing them toward electrodes, neutral drag (F_N), thermophoretic force (F_{th}), and gravity (F_G) [2]. F_N and F_{th} scale with r_p^2, while F_G scales with r_p^3.

The balance of these forces determines the distribution of particles. As the particles grow, ion drag becomes the dominant force. Once they reach a critical size, they are evacuated from the plasma center, creating a dust-free zone known as a void, where the nucleation of a new generation of particles starts [8].

Meanwhile, reactive species (radicals and ions) from the plasma reach surfaces such as electrodes and chamber walls, leading to the formation of thin films [3].

In this work, we first identify the optimal conditions for nanoparticle formation and hydrocarbon film deposition in a methane/argon plasma. We then study the evolution of nanoparticles during their formation cycle using a quartz crystal microbalance (QCM) and scanning electron microscopy (SEM). In a second phase, we also utilize these techniques to measure film thickness, estimate deposition rates and densities, and analyze surface morphologies.

[*] abdel-rahman.daher@univ-orleans.fr

During the reviewing process, use "review mode"
– single column
– double spacing

4   Conclusion

In this study, we demonstrated the production and quantification of nitrite species in acoustically levitated droplets exposed to nanosecond plasma discharges. By combining Griess reagent with plasma-treated droplets and analyzing the resulting colorimetric changes via image processing, we established a reliable correlation between droplet coloration (NTSC intensity) and nitrite concentration. The calibration curve allowed us to quantify nitrite content with a simple and non-invasive optical method. Furthermore, we observed that nitrite concentration increases with the number of plasma pulses, following a second-order polynomial relationship, which suggests cumulative effects of plasma–liquid interactions over time.

These results highlight the potential of acoustic levitation combined with optical analysis as a powerful tool for studying plasma–liquid interactions in a controlled environment, more representative of aerosol conditions than traditional static configurations. Future work could extend this approach to the quantification of other reactive species and explore the role of various plasma parameters (voltage, pulse frequency, ambient gas composition) on species generation and reaction kinetics.

A canonical conclusion

Abstract

The motion of colloidal particles induced by solute concentration gradients, called diffusiophoresis, has emerged as a promising transport mechanism in microfluidic and porous media applications. While previous studies have demonstrated the efficiency of diffusiophoresis in dead-end pores, quantifying its effects in a simple and well-defined geometry is essential for advancing the understanding of transport in complex porous media. In this study, we investigate the dynamics of diffusiophoretic particle motion within a 60 μm wide pore under a controlled NaCl concentration gradient. There is a significant modification of the velocity field when a concentration gradient is applied. We observe that the diffusiophoresis velocity approaches 20 μm.s^{-1}, in agreement with theoretical diffusiophoretic behavior. The negatively charged particles move towards the high concentration. These results confirm the potential of diffusiophoresis for enhanced particle transport in confined environments.

A canonical abstract

1   Introduction

Glioblastoma is one of the most aggressive, complex, frequent and treatment-resistant brain tumors between adult people. It is a cancerous tumor of glial tissue, the 4 grade glioma or the astrocytoma - astrocyte's cancer. The five-year survival rate for glioblastoma patients is only about 7 percent. For nowadays there is no efficient and safe treatment against this cancer. Usually, the treatment incluses surgery, postoperative radiation and chemotherapy. But even after all of these steps the prognosis stays not optimistic [1]. For this

Some use of the emotional register helps

2.6 Confocal laser scanning microscopy and colocalization quantification

Cells were fixed in 4 percents paraformaldehyde (PFA) in PBS solution at room temperature for 20 min. Then, the coverslips were mounted in Vectashield medium for fluorescence (H-100, Vector Laboratories, USA). Confocal microscopy was performed using a Zeiss LSM 510 confocal laser scanning microscope with an apochromat 63× /1.4 oil differential interference contrast (DIC) objective (Carl Zeiss, USA). ZEISS ZEN software was used to quantify the cell-associated fluorescence. The comparative degree

What should be changed here ?
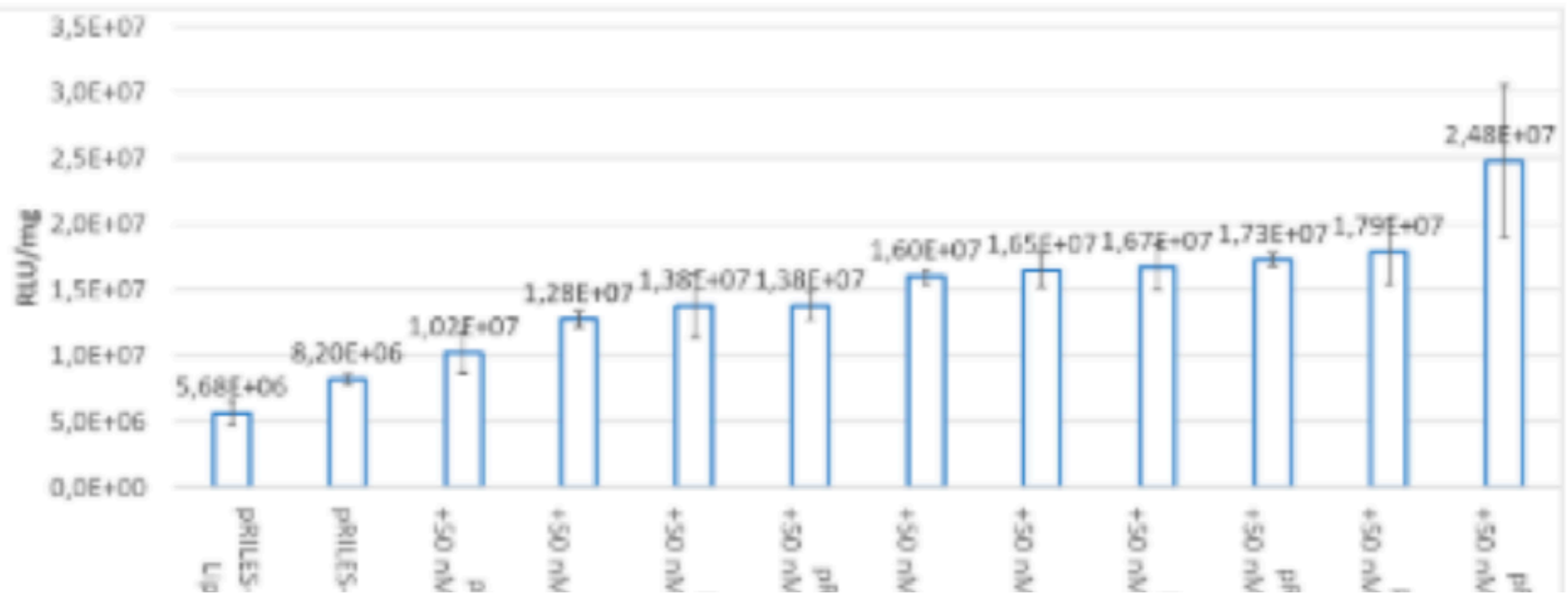
Figures must always be of high quality

In depth characterisation of clinker of calcium aluminate cement: setting a reference for the development of an innovative production process

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What would you change here ?

Abstract

Introduction

Optimizing image quality in SPECT-CT requires to understand reconstruction algorithms but also requires a deep comprehension of detection performances of a camera. The best way to evaluate global performances is to follow international guideline such as NEMA NU1 2023 [18] or AAPM TG 177 report [12]. Yet, those reference documents do not provide methods for 3D ring CZT cameras.

Material and methods

NEMA NU1 - 2023 extrinsic planar performance measurements (energy resolution, spatial resolution and sensitivity) were adapted in order to be performed on a 3D CZT camera (GE Starguide).

Results

The results obtained with the methode described are in a good agreement with manufacturers data or published studies. Although they are far from the original description of the reference documents, the methods described allow the expectations and general idea of the tests to be respected.

Conclusion

This work showed how NEMA planar tests and analysis can be adapted to the geometry of this new kind of camera.

What would you change ?

Acknowledgements

Acknowledging funding agencies is vital

ACKNOWLEDGMENT

We would like to take a moment to sincerely thank INSA CVL and the Centre-Val de Loire region for their generous financial support for my thesis journey. Their funding is absolutely essential in helping me carry out my research and push the boundaries of knowledge in my field.

What do you think of this ?

Abstract

The present work aims to study the effect of physicochemical parameters, namely equivalence ratio or reducer-oxidizer ratio ϕ and reducer particle size on the burning velocity of Fe/CuO pyrotechnic compositions. The burning velocity is calculated by using a Matlab script. This script studies combustion videos by tracking front flame position and then determine the burning velocity. The experiments showed that equivalence ratio or reducer-oxidizer ratio ϕ has a significant influence on the burning velocity. Indeed, for the majority of carried out experiments, the maximum burning velocities are obtained for an equivalence ratio ϕ of

1.4245, 1.7482 or 2.1367 higher than stoichiometry ($\phi = 1$) when the mixture is rich in Fe. In addition, the effect of Fe particle size on the burning velocity is investigated. Results showed that maximum burning velocities are obtained for Fe particle size between 20 μm and 40 μm and are equal to 5.22 and 10.91 $mm.s^{-1}$ for first and second ignitions respectively. While the minimum burning velocities are obtained for Fe particle size between 40 μm and 80 μm and are equal to 1.392 and 1.940 $mm.s^{-1}$ for first and second ignitions respectively.

What would you change ?

1 Introduction

In today's increasingly data-driven environment, organizations rely heavily on workflow languages to model, automate, and monitor their business processes. These workflows are often responsible for handling sensitive personal data, which introduces legal and ethical obligations for data protection. Regulations such as the General Data Protection Regulation (GDPR) have set strict guidelines on how personal data should be managed, shared, and protected within information systems.

Despite their widespread use, most industrial workflow languages — including popular graphical notations — concentrate on the structural and operational aspects of process execution. While this ensures accessibility, it leaves important gaps in verifying correctness and ensuring compliance with data protection regulations. A key limitation is the lack of mechanisms for reasoning about knowledge within multi-agent systems, where the legality of actions often depends on what information is known or unknown by different agents at specific stages of the process.

This challenge motivates my current Ph.D. research, which aims to bridge this gap by introducing formal verification techniques into the modeling of workflows, with an emphasis on sensitive data man-

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agement. The core idea is to design a new workflow language that explicitly incorporates epistemic reasoning, that is, the ability to formally capture and verify properties related to agents' knowledge and ignorance as workflows execute. By doing so, the language will allow system designers to verify whether workflows respect both functional correctness and privacy-related constraints imposed by regulations such as the GDPR.

This paper serves as a representative illustration of the concepts of workflow modeling and formal verification, and does not present rigorous or finalized research results. Rather, it outlines the direction in which my doctoral research is focused, aiming to progressively build a formally grounded framework for verifying the correctness and compliance of business processes. To make these ideas more concrete, a small illustrative example is introduced, offering a simple yet effective way to understand how formal verification can be applied to workflow systems. This work also includes the development of an automated verification toolkit capable of formally checking workflows for both correctness and regulatory compliance. By combining formal semantics, epistemic reasoning, and model-checking capabilities, the objective is to address key limitations in existing industrial tools and provide a rigorous, reliable foundation for managing sensitive data securely within workflow-based systems.

The introduction should include references, providing the reader with links to existing literature.

Bochra seaali[1], Marylène VAYER[1], Mingsheng Ji[2], Sandra Kalem[3]
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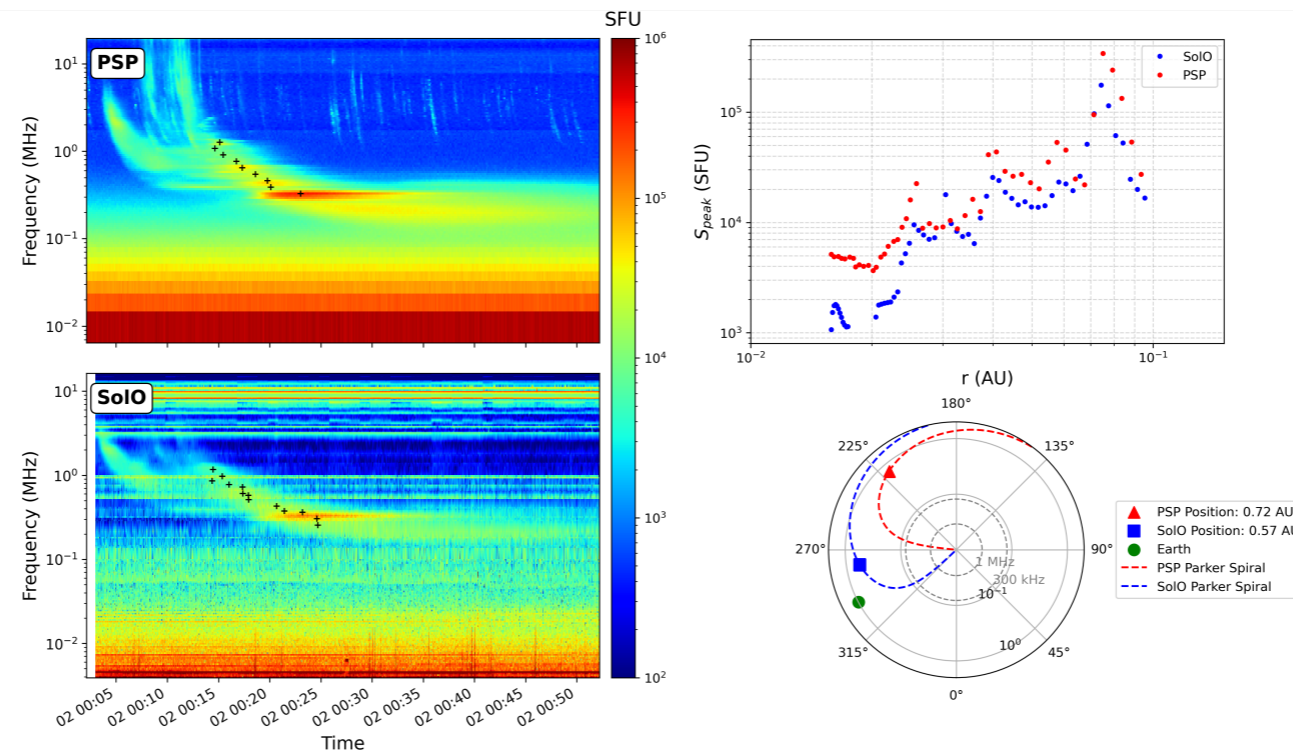
Names must be correct

Figure 3. Example of a Type III burst with fine structures (Striae) observed on 2023-11-02. The panel layout is the same as in Figure 2.

that Type III bursts with prominent striae exhibit significantly greater fluctuations in S_{peak} as a function of distance compared to typical Type III events (see Figure 3).

Check font sizes

To summarize, we present a practical way to extend the relative rate approach for measuring the bimolecular reactivity of stabilized Criegee intermediates, which we demonstrate for two contrasting insertion reactions: CH_2OO + carboxylic acids/alcohols. In both cases, experiments yield satisfactory relative rate data, although alcohols present a greater challenge because of their much lower reactivity.

This new method can be applied to less volatile and less reactive co-reactants than can typically be accessed through absolute methods. Such reactions could result in extremely low volatility adduct species in the atmosphere,[19] which may impact aerosol formation processes.

These experiments allow laboratories without dedicated apparatuses for making absolute measurements, e.g. pulsed-laser photolysis–cavity ring down spectroscopic systems, to make relative measurements in chamber facilities, adding to the repertoire of accessible experiments.

Finally, the parameter space of the SCI bimolecular reactions remains sparse, and accurate absolute measurements are needed as references in this technique. Relative measurements represent an invaluable component to kinetic database for other oxidants,[39] and we anticipate the same rule will come to apply to SCI reactions.

This article does not have a regular "conclusion" section. Some journals indeed have no clear sections.

Figure 1 Muljijet setup developed at GREMI with reactors

What about this figure ?

To summarise

Common issues with your reviews

- **Be very specific** : if something is incorrect, say explicitly *what* the issue is and *where* it occurs in the text

- **Be very clear** : avoid wordings such as "maybe", "seems", "It seems that", etc.

- **Avoid colloquial or harsh words** such as "sloppy", "messy", "well done", etc.

- **Justify** : If you request rejection or major revisions, then justify your decision and explain in detail what needs to be changed.

- **You are not required to comment on each item :** highlight what is incorrect or should be improved (also what is good !)

- **Your role** is to assist the editor in making a decision**.**

Start your introduction/abstract with

- an intriguing example

- a provocative quotation that is closely related to your argument

- a puzzling scenario

- a vivid and perhaps unexpected anecdote

- a thought-provoking question

- a strong statement

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Finish your abstract/conclusions with

- **outlooks** : what should the next steps be ?

- **impacts** : what impact will your study have ?
  why should you be funded for this ?

- **take home message** : what do you want the reader to
  remember from this study ?

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A good article should not only be rigorous and provide novel results

Make your article **inspiring** !