



InterPore News

Issue #08, 17 April 2020

Dear InterPore Friends,

The COVID-19 pandemic is viewed from many scientific viewpoints. Apart from causing tremendous misery all around the globe, COVID-19 raises a lot of scientific questions. One of those questions is: Should we all wear facial protective masks? Although the answer is binary (yes/no), the reasoning behind the answer is massively complicated, and not only based on biomedical arguments. For example, in The Netherlands where I live, the current stock is simply insufficient for the entire population. Also, psychological arguments come into play—people becoming reckless when wearing a mask versus people being more aware of the dangers, even when wearing a bandana. And a practical concern: a simple face mask may actually collect a high concentration of viruses. Improper handling (removing in the evening) might be even more dangerous than not wearing one at all. Hence, one can see that national policies vary globally.

As a porous media community, we understand how masks work, being essentially a filtration technique. Noushine Shahidzadeh wrote for us a short article on the functioning of different types of masks and comparing the safety of a high-grade surgical mask to a bandana.







I also would like to draw attention to the Album of Porous Media Structure and Dynamics. Perhaps being away from the lab helps to spend some time in your archive and find some monumental images that you couldn't publish but still mark a significant point in understanding a specific research question. Here is an way to share it!

Don't forget to check the In Journals section and the research positions.

Stay healthy!

Matthijs de Winter
Editor-in-Chief
InterPore News

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Community News

Filtration of aerosol particles by different types of masks



Photo: Robert Pastryk on Pixabay

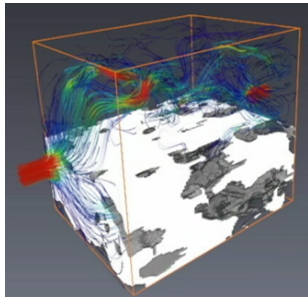
Noushine Shahidzadeh, University of Amsterdam, The Netherlands

Currently because of the COVID-19, the use of protective masks is a very dynamic area of porous media research. Especially in Asian countries, many people wear surgical masks when going out in the streets, and it has been argued that the relatively smaller damage that the coronavirus did in some Asian countries was because of the daily use of masks. However, how good is the protection provided by different types of masks? And how does one test that?

Full read

Album of Porous Media Structure and Dynamics

*Due to the reschedule of the annual InterPore conference to August/September, the deadline for image submissions has also been extended until **30 September 2020**. Further information is available at the [Album site](#).*



Archive from Matthijs de Winter

An original initiative by Ezequiel Medici and Alex Mayer: a book, to be printed by Springer, called *Album of Porous Media Structure and Dynamics*. The Album will provide a collection of state-of-the-art visualizations of the different science and engineering aspects of porous media to serve as a reference for future research and education. This collection of scientific works will cover experimental and computational visualizations, visualization of new porous materials, and visualization of transport processes that occur in porous materials as well as in other aspects. The authors are seeking contributions that illuminate a wide range of science and engineering phenomena and apply a broad range of visualization techniques, from high-resolution pore morphology to illustrations of historical observations and use of porous media.

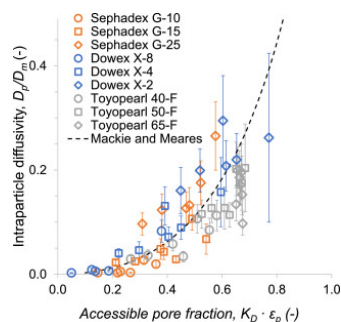
Contributions will be peer-reviewed according to the relevance and innovation of the scientific topic of the image and the quality of image, including the resolution and coloring. A brief accompanying text is also required. The Album will be published in two languages: English and Spanish.



InterPore In Journals

Predicting intraparticle diffusivity as function of stationary phase characteristics in preparative chromatography

A. Schultze-Jena, M.A. Boon, D.A.M. de Winter, P.J. Th. Bussmann, A.E.M. Janssen, A. van der Padt



Chromatographic processes rely on porous structures to selectively vary mass transfer for a range of molecules. In industrial processes these structures often reduce diffusivity, which likely becomes the main bottleneck of process efficiency. In this article the effect of measurable pore characteristics on intraporous diffusivity is related to the reduction of diffusion for a range of molecules in a range of porous matrices. This knowledge is used to create a predictive tool, which facilitates process design.

Journal of Chromatography A: Predicting intraparticle diffusivity as function of stationary phase characteristics in preparative chromatography

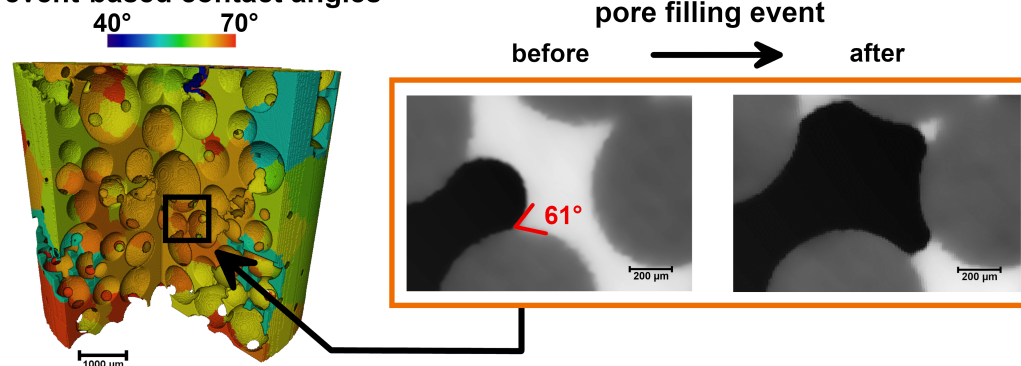
Corresponding Author: Anton Schultze-Jena

Event-based contact angle measurements inside porous media using time-resolved micro-computed tomography

Arjen Mascini, Veerle Cnudde, Tom Bultreys

Recent micro-computed tomography (mCT) studies found unexpectedly wide contact angle distributions measured on static fluid distributions inside the pores, but these might not be directly relevant to the fluid dynamics. Here, we approximated receding contact angles locally in time and space on two time-resolved mCT datasets of drainage. Whenever a meniscus suddenly entered one or more pores, contact angles in the surrounding pores were measured in the time step just prior to the displacement event. We introduced a new force-based contact angle, defined to recover the measured capillary pressure in the invaded pore throat prior to interface movement.

event-based contact angles



Journal of Colloid and Interface Science: Event-based contact angle measurements inside porous media using time-resolved micro-computed tomography

Corresponding author: Arjen Mascini

Group: pprogress



Promote your Publication

InterPore Members, do you want to promote your publication to the community? If so, please submit your highlight to newsletter@InterPore.org. Note that we will not review the entries nor does InterPore endorse the published work. Furthermore, we publish on a "submitted first, published first" basis. The highlighted publication should be no older than 6 months (available online).

The highlight should be short (500 characters) and contain an illustration. Please note that we offer this opportunity exclusively to InterPore members. If you would like to become a member, please have a look [here](#).



Research Positions

-  PhD position on Impact of Soil Hydrophobicity on Flooding and Erosion Hazards, Coventry University, UK
-  Chief Scientist (2 positions) in NORCE Energy in the area of Computational Science, Modeling and Simulation, Bergen, Norway



InterPore Calendar

Date	Event
14-16 May 2020	The Hellenic National InterPore Chapter meeting (Athens, Greece)
30 August - 4 September 2020	The 12th annual InterPore meeting (Qingdao, China)
1-2 October 2020	The German Chapter meeting (Stuttgart, Germany)
26-28 October 2020	The French Chapter meeting (Strasbourg, France) (Flyer)
2 November 2020	The Benelux Chapter meeting (Enschede, The Netherlands)

Date	Event
23-25 November 2020	The Australian Chapter meeting (Perth, Australia)
31 May - 3 June 2021	The 13th annual InterPore meeting (Edinburgh, UK)
15-21 May 2022	The 14th annual InterPore meeting (Albuquerque, New Mexico, USA)



Imprint

InterPore News, www.new.interpore.org

Published in electronic form by International Society for Porous Media (InterPore)
Circulated free of charge to members and non-members of InterPore.

Articles and news items on the study and characterization of porous media,
especially when relevant to other types of porous media,
are welcomed for publication in this newsletter, issued twice a month.

Find us on: [in](#) | [f](#) | [t](#)

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