



UvA-DARE (Digital Academic Repository)

Sol-gel transition in porous media

Interplay of drying and wetting

le Dizes, R.

Publication date

2024

[Link to publication](#)

Citation for published version (APA):

le Dizes, R. (2024). *Sol-gel transition in porous media: Interplay of drying and wetting*. [Thesis, fully internal, Universiteit van Amsterdam].

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Acknowledgements

If there's one thing that remained constant throughout this PhD, it was Amsterdam's rainy weather, which was my best enemy from beginning to end, always reminding me that persistence is key. Despite that, I enjoyed my PhD from the start until the end, and this is largely thanks to the amazing supervisor I had. The first person that I would like to acknowledge is Noushine, with whom I completed both my master's research project and my PhD. It is thanks to you that I decided to pursue a PhD in the first place, after spending six months under your supervision during my master's. Your enthusiasm for research was truly motivating, as much as your appreciation for beauty in the lab, your tenacity and your passion for science were touching and inspiring. My second acknowledgements go to Sara, with whom I discovered numerical simulations. Thank you for your guidance and support, as well as for your scientific rigor, which undoubtedly improved our articles and my PhD manuscript. I also want to thank Marc Prat, my "unofficial" supervisor. You welcomed me at the Institut de Mécanique des Fluides de Toulouse for almost a month and provided invaluable assistance, especially when I started working on Pore Network Models. Thank you for your time and patience.

I am grateful to all the members of the committee who took the time to read this manuscript. In particular, prof. J. Carmeliet, thank you for the numerous discussions and meetings we had throughout my PhD. I also want to express my deep gratitude to dr. H. Derluyn, with whom I collaborated during this PhD. Thank you for welcoming me for two weeks at the DMEX in Pau, where I learned a great deal about X-ray tomography analysis.

This PhD would not have been possible without the scientific contributions of many people, whom I want to acknowledge here. Chapter 3 was written together with Elham Mirzahosseini, with guidance from Daniel Bonn and Marion Grzelka. I would like to thank both Daniel and Marion for their great advice and assistance in the lab. I am also grateful to Leo Pel, with whom I conducted the NMR measurements for Chapter 5 at the Technical University of Eindhoven. I also thank Mario Scheel and Tinhinane Chekai for acquisition and analysis of tomography data from Synchrotron SOLEIL. Chapter 6 was written with contributions from Jop van der Laan and Lucile Hamm, whom I had the pleasure of supervising during their master's projects. Thank you, Lucile, for your help and your constant motivation; it was a great pleasure working with you, and I hope you enjoyed it too! Jop, we've known each other for a long time now (and I hope for much longer still!), and it was a lot of fun working together for those 10 months. Thanks for everything that you did and for your help at the synchrotron but also thanks for the numerous discussions, drinks, dinners in Amsterdam or Groningen and the

small adventure in Paris (and in Maastricht !).

Throughout my PhD, I also received help from many others. Paul Kolpakov, so many thanks are needed for your constant support in the lab but also for your friendship, you're always present, always in a good mood and it is a lot of fun to have you around. Antoine D., thanks for always being someone I could turn to for help (or to vent...). I also want to thank Rowen Hersche, whom I worked with during his bachelor project, even though his subject was not directly related to my PhD.

Elham, you deserve a special mention. Working with you was not only productive but also incredibly enjoyable. But I am mostly grateful for being your friend and for all the time we spend together in those four years. I'm truly happy that we are defending in the same week so that we can celebrate together.

This PhD would not have been the same without the help and support from Rozeline. We started together with Noushine as our supervisor and now we finish together, after countless hours together in and out of the lab – fighting over set-ups or trying to understand articles, or worse, Noushine's planning. Beyond all that, I truly want to thank you for your mental support and for all the fun we had together. I should mention all the conferences and trips we took together, which you made so much more enjoyable: Abu Dhabi, Edinburgh, Paris, Marseille, Corsica etc. Anna-Maria, Catrin and Emma, I am also grateful that we met you in Corsica with Rozeline, and at a bunch of other conferences, and /or week end away! See you soon in Berlin! I'll miss my favorite colleague a lot – thank you so much for all these years.

I would also like to acknowledge the friends I made along the way in or outside the Soft Matter Group. First, thanks to the Mokumboot team, Antoine P. and Simon. It was great, and I'll miss the time we spent together in Amsterdam (though I won't miss Simon talking in the office!). Antoine, thank you for always being there when I needed it. I also want to thank all the members of Noushine's group, past and present, whom I haven't yet mentioned, especially Tess, Menno, Anne, Alexander and Femke, for all the small talks, pastries, drinks, etc. I also had a great time thanks to all the time I spent with Felipe, a drama queen but an amazing friend, and Clara. Thanks for the drinks, parties, dancing, "wandelen" and "fietsen." This also goes for Jackson & Catharine, who made me celebrate Thanksgiving for four years, as well as Marie, Rosa, Daan, Yuri, Liang and Antoine G. Big thanks to my two roommates, Leonardo and Jiří, with whom I lived for 4 years: it was great and smooth, I had an amazing time in Javastraat! Good luck with your future roommate that will over take my spot!

I would like to thank the entire Soft Matter Group for the amazing working environment – I'm sure each of you helped at some point over these four years: Abishek, Nico, Jared, Mohammed, Thijs, Tom, Stefan, Wenfeng, Jack, Dongdong, Panlin, Loes, Nick, Ina, Kaili, Madeline, Daniel A, Thibault, Daniel J, Vera, Marco, Caroline and everyone else. Outside of the Soft Matter Group, I thank the

Acknowledgements

members of the IoP PhD & Post-Docs Council, with whom I had the opportunity to organize events for the people of the Institute of Physics. Finally, I am grateful for the help I received from everyone in the workshop, especially Gertjan from the glass workshop, and from everyone in the secretariat and administration: Joost, Jirina, Rose, Anne-Marieke, and especially Astrid, with whom I organized the Pizza Lunch Seminars for more than a year.

Je termine ces remerciements en français pour ma famille. Je remercie mes deux soeurs Cécile et Mathilde parce que je les aime et qu'elles me supportent depuis longtemps mais aussi parce que je me suis retrouvée à travailler avec les deux pendant la thèse (et oui!). Mathilde, j'ai bien rigolé pendant ton TIPE dans le labo, j'espère que je ne t'ai pas dégoutée des manip. Cécile, merci de m'avoir fait découvrir l'IMFT pendant le mois que j'y ai passé (j'étends les remerciements à Tobias, qui m'a laissée squatter votre canap pendant tout ce temps). Merci aussi pour les EGU à Vienne, c'était trop bien. Je remercie Papa et Maman, qui nous ont appris à être curieuses; à aimer les sciences depuis petites et qui ont dû nous aider à faire nos devoirs de maths et de physique pendant des années pour qu'on en arrive là. 9 années d'études plus tard et je ne comprends toujours pas vos articles, ni à l'un ni à l'autre, mais ce n'est pas grave.

Et enfin, je remercie Nathan pour son aide et sa patience. Merci pour les relectures des articles et des chapitres. Merci de m'avoir écoutée quand je te racontais tous les détails de mon travail et d'avoir fait comme si ça t'intéressait. Merci d'avoir supporté les hauts et les bas et mes sautes d'humeur, promis c'est fini.

