

Michel Versluis - Publication list

Current *h*-index = **66** - *Scopus*

Number of peer-reviewed publications: **256**

Number of citations: **14,170**

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Google Scholar: *h*-index **77**, citations **20,997**, i10-index **202**

2025

267. Monte Carlo simulation platform for laser Doppler flowmetry.
David Thompson, Wietske Verveld, Guillaume Lajoinie, Michel Versluis, Wiendelt Steenbergen, and Nienke Bosschaart.
(under review, 2025).
266. Accurate sizing of monodisperse microbubble suspensions by optical attenuation spectroscopy.
Martin van den Broek, Hidde Sikkema, Niladri Satpathi, Loes Kleinsmit, Albert van den Berg, Michel Versluis, and Tim Segers.
(under review, 2025).
265. A systematic review on the use of intravascular ultrasound and optical coherence tomography in the femoropopliteal tract.
Lisa Rutten, Stan E.J. Reijnen, Lennart van de Velde, Michel Versluis, and Michel M.P.J. Reijnen.
(under review, 2025).
264. Reducing stent-induced blooming artifacts using virtual monoenergetic imaging reconstructions in a superficial femoral artery phantom: an in-vitro study
Lisa Rutten, Lennart van de Velde, Cornelius Slump, Jasper Martens, Kartik Jain, Michel Versluis, and Michel M. P. J. Reijnen
(under review, 2025).
263. Shape oscillation and 3-D microstreaming profile of a phospholipid-coated microbubble attached to a wall.
Hongchen Li, Yuchen Wang, Ruisheng Su, Christian Cierpka, Michel Versluis, Antonius F.W. van der Steen, Nico de Jong, Martin D. Verweij, and Klazina Kooiman.
(under review, 2025).
262. Novel degradable mold-based human engineered mini-heart platform for mimicking ventricular pump function.
Marcelo C. Ribeiro, Mariel Cano-Jorge, Simone ten Den, Danique Snippert, Marcel Karperien, Tom Kamperman, Guillaume Lajoinie, Michel Versluis, and Robert Passier.
(under review, 2025).
261. Delay-encoded cascaded waves for ultrafast ultrasound imaging.
Charlotte Nawijn, Michel Versluis, Tim Segers, and Guillaume Lajoinie.
(under review, 2025).
260. Blood flow characteristics in the femoral bifurcation of healthy subjects.
Majorie van Helvert, Janna Ruisch, Joosje M.K. de Bakker, Anne E.C.M. Saris, Chris L. de Korte, Michel Versluis, Erik Groot Jebbink, and Michel M.P.J. Reijnen.
(under review, 2025).
259. Dissolution and vaporization of a water droplet in oil exposed to a temperature ramp.
Muhammad Saeed Saleem, Michel Versluis, and Guillaume Lajoinie.
(under review, 2025).
258. Vaporization dynamics of a super-heated water-in-oil droplet: modeling and numerical solution.
Muhammad Saeed Saleem, Michel Versluis, and Guillaume Lajoinie.
(under review, 2025).
257. In-vivo validation of computational fluid dynamics for determining the pressure gradient for multi-segmental femoropopliteal disease.
L. van de Velde, L. Rutten, M. van Werkum, P. Cernohorsky, E. Groot Jebbink, M. Versluis, and M.M.P.J. Reijnen.
(under review, 2025).

256. Ultrasound contrast microbubbles to predict the microsphere distribution during radioembolization, an in-vitro proof of concept study.
Jan L. van der Hoek, Tess J. Snoeijink, Hadi Mirgolbabaee, Romaine Kunst, Michel Versluis, Jutta Arens, Srirang Manohar, and Erik Groot Jebbink
Drug Delivery Reviews (accepted, 2025).
255. PROTEUS: a physically realistic contrast-enhanced ultrasound simulator – Part II: Imaging applications.
Nathan Blanken, Baptiste Heiles, Alina Kuliesh, Michel Versluis, Kartik Jain, David Maresca, and Guillaume Lajoinie.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control (accepted, 2025).
254. Ultrasound-actuated microfluidic flow-focusing allows control of bubble size and production rate.
Sarah Cleve, Tim Segers, Michel Versluis, and Guillaume Lajoinie.
Phys. Rev. Appl. (accepted, 2025).
253. Vascular flow phantom of a cohort-based averaged abdominal aortic aneurysm: Design, fabrication and characterization.
Hadi Mirgolbabaee, Jeffrey R. Nagel, Jelle Plomp, Ashkan Ghanbarzadeh-Dagheyan, Jaimy A. Simmering, Michel Versluis, Michel M.P.J. Reijnen, and Erik Groot Jebbink.
Ann. Biomed. Eng. (on-line, 2025).
<https://doi.org/10.1007/s10439-025-03717-y>
252. Optimizing the radiopacity of an injectable polymer used for treatment of type II endoleak after endovascular aneurysm repair.
Jeffrey R. Nagel, Erik Groot Jebbink, Stefan P.M. Smorenburg, Arjan W.J. Hoksbergen, Rutger J. Lely, Michel Versluis, and Michel M.P.J. Reijnen.
Cardiovasc. Eng. Technol. (on-line, 2025).
<https://doi.org/10.1007/s13239-025-00779-w>
251. Imaging behind the plaque: Improved blood flow imaging using an iterative scheme for active attenuation correction.
Jelle Plomp, Ashkan Ghanbarzadeh-Dagheyan, Michel Versluis, Guillaume Lajoinie, and Erik Groot Jebbink.
Ultrasound Med. Biol. **51**(6), 984–998 (2025).
<https://doi.org/10.1016/j.ultrasmedbio.2025.02.012>
250. Waveform-specific performance of deep learning-based ultrasound super-resolution models.
Rienk Zorgdrager, Nathan Blanken, Jelmer Wolterink, Michel Versluis, and Guillaume Lajoinie.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control (on-line, 2025).
<https://doi.org/10.1109/TUFFC.2025.3537298>
249. Radiofrequency ablation for thyroid nodules (RATED study) - analysis of a learning curve and predictors of success.
M.M.D. van der Meeren, T. Boers, P. de Graaf, K.M. Duvivier, K.M.A. Dreijerink, L.N. Deden, P. Veendrick, P. Cernohorsky, F.B.M. Joosten, B.M.C. Savelberg, S.J. Braak, S.H.P.P. Roerink, M. Versluis, S. Manohar, and W.J.G. Oyen.
J. Clin. Endocrinol. Metab. (on-line, 2025).
<https://doi.org/10.1210/clinem/dgaf058>
248. Role of surfactants on droplet formation in piezoacoustic inkjet printing across microsecond-to-second timescales.
Maaike Rump, Christian Diddens, Uddalok Sen, Michel Versluis, Detlef Lohse, and Tim Segers.
Phys. Rev. Appl. **23**, 024076 (2025).
<https://doi.org/10.1103/PhysRevApplied.23.024076>
247. Ambient pressure sensitivity of subharmonically vibrating single microbubbles.
Sander Spiekhout, Yuchen Wang, Tim Segers, Klazina Kooiman, Michel Versluis, Jason Voorneveld, Nico de Jong, and Johannes G. Bosch.
Ultrasound Med. Biol. **51**(6), 931–940 (2025).
<https://doi.org/10.1016/j.ultrasmedbio.2025.01.016>

246. Frequency-domain decoding of cascaded dual-polarity waves for ultrafast ultrasound imaging. Charlotte Nawijn, Joosje de Bakker, Tim Segers, Chris de Korte, Michel Versluis, Anne Saris, and Guillaume Lajoinie. *IEEE Trans. Ultrason. Ferroelectr. Freq. Control* **72**(3), 321–337 (2025). <https://doi.org/10.1109/TUFFC.2025.3534429>
245. Controlling the stability of monodisperse phospholipid-coated microbubbles by tuning their buckling pressure. Benjamin van Elburg, Anne Lassus, Samir Cherkaoui, Guillaume Lajoinie, Michel Versluis, and Tim Segers. *J. Colloid Interface Sci.* **685**, 449–457 (2025). <https://doi.org/10.1016/j.jcis.2025.01.114>
244. Stress-strain analysis of single ultrasound-driven microbubbles for viscoelastic shell characterization. Charlotte L. Nawijn, Sander Spiekhout, Jason Voorneveld, Johannes G. Bosch, Michel Versluis, Tim Segers, and Guillaume P.R. Lajoinie. *J. Acoust. Soc. Am.* **157**(2), 897–911 (2025). <https://doi.org/10.1121/10.0035639>
243. Soft stereolithographic 3D printed phantoms for dual-modality particle image velocimetry (PIV). E. Hosseinzadeh, H. Mirgolbabaei, L. van de Velde, M. Versluis, E. Groot Jebbink, A. Aguirre-Soto, and M. M. P. J. Reijnen. *Exp. Fluids* **66**, 20 (2025). <https://doi.org/10.1007/s00348-024-03938-2>

2024

242. Additive manufacturing of 3D flow-focusing millifluidics for the production of mono-sized curable microdroplets. Muhammad Saeed Saleem, Timothy T.K. Chan, Michel Versluis, Domink Krug, and Guillaume Lajoinie. *RSC Advances* **14**(53), 39276 (2024). <https://doi.org/10.1039/d4ra07234k>
241. Optimizing high-intensity focused ultrasound-induced immunogenic cell-death using passive cavitation mapping as a monitoring tool. Yanou Engelen, Dmitri V. Krysko, Iuliia Effimova, Karine Breckpot, Michel Versluis, Stefaan De Smedt, Guillaume Lajoinie, and Ine Lentacker. *J. Control. Release* **375**, 389–403 (2024). <https://doi.org/10.1016/j.jconrel.2024.09.016>
240. Swirling flow quantification in helical stents using ultrasound velocimetry. A. Ghanbarzadeh-Dagheyan, M. van Helvert, L. van de Velde, M.M.P.J. Reijnen, M. Versluis, and E. Groot Jebbink. *J. Endovasc. Ther.* (on-line, 2024). <https://doi.org/10.1177/15266028241283326>
239. Second order and transverse flow visualization through three-dimensional particle image velocimetry in millimetric ducts. N.C. Harte, D. Obrist, M. Versluis, E. Groot Jebbink, M. Caversaccio, W. Wimmer, and G.P.R. Lajoinie. *Exp. Therm. Fluid Sci.* **159**, 111296 (2024). <https://doi.org/10.1016/j.expthermflusci.2024.111296>
238. 3D ultrasound guidance for radiofrequency ablation in an anthropomorphic thyroid nodule phantom. Tim Boers, Sicco Braak, Wyger Brink, Michel Versluis, and Srirang Manohar. *Eur. Radiol. Exp.* **8**:115 (2024). <https://doi.org/10.1186/s41747-024-00513-6>
237. Deep learning-based segmentation of 3D ultrasound images of the thyroid. Roxane Munsterman, Tim Boers, Sicco Braak, Jelmer M. Wolterink, Michel Versluis, and Srirang Manohar. *WFUMB Ultrasound Open* **2**(2), 100055 (2024). <https://doi.org/10.1016/j.wfumbo.2024.100055>

236. PROTEUS: a physically realistic contrast-enhanced ultrasound simulator – Part I: Numerical methods.
Nathan Blanken, Baptiste Heiles, Alina Kuliesh, Michel Versluis, Kartik Jain, David Maresca, and Guillaume Lajoinie.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control (on-line, 2024).
<https://doi.org/10.1109/TUFFC.2024.3427850>
235. Functionalized monodisperse microbubble production: Microfluidic method for fast, controlled, and automated removal of excess coating material.
Martin van den Broek, Michel Versluis, Albert van den Berg, and Tim Segers.
Microfluid. Nanofluid. **10**(1), 120 (2024).
<https://doi.org/10.1038/s41378-024-00760-y>
234. Are monodisperse phospholipid-coated microbubbles 'mono-acoustic'?.
Sander Spiekhou, Benjamin van Elburg, Jason Voorneveld, Nico de Jong, Michel Versluis, Johannes G. Bosch, and Tim Segers.
Appl. Phys. Lett. **124**, 231601 (2024).
<https://doi.org/10.1063/5.0215736>
233. High-frame-rate ultrasound velocimetry in the healthy femoral bifurcation: a comparative study against 4-D flow magnetic resonance imaging.
Majorie van Helvert, Janna Ruisch, Joesje de Bakker, Anne Saris, Chris de Korte, Michel Versluis, Erik Groot Jebbink, and Michel Reijnen.
Ultrasound Med. Biol. **50**(12), 1755–1763 (2024).
<https://doi.org/10.1016/j.ultrasmedbio.2024.05.013>
232. Validation of ultrasound velocimetry and computational fluid dynamics for flow assessment in femoral artery stenotic disease.
Lennart van de Velde, Majorie van Helvert, Stefan Engelhard, Ashkan Ghanbarzadeh-Dagheyan, Hadi Mirgolbabaee, Jason Voorneveld, Guillaume Lajoinie, Michel Versluis, Michel Reijnen, and Erik Groot Jebbink.
J. Med. Imaging **11**(3), 037001 (2024).
<https://doi.org/10.1117/1.JMI.11.3.037001>
231. High-speed optical characterization of protein-and-nanoparticle-stabilized microbubbles for ultrasound-triggered drug release.
Charlotte L. Nawijn, Tim Segers, Guillaume Lajoinie, Sigrid Berg, Sofie Snipstad, Catharina de Lange Davies, and Michel Versluis.
Ultrasound Med. Biol. **50**(8), 1099–1107 (2024)
<https://doi.org/10.1016/j.ultrasmedbio.2024.03.011>
230. Lesion eccentricity plays a key role in determining the pressure gradient of serial stenotic lesions.
L. van de Velde, E. Groot Jebbink, K. Jain, M. Versluis, and M.M.P.J. Reijnen.
Cardiovasc. Intervent. Radiol. **47**(5), 533–542 (2024).
<https://doi.org/10.1007/s00270-024-03708-x>
229. A unifying Rayleigh-Plesset-type equation for bubbles in viscoelastic media.
Alexandros T. Oratis, Kay Dijs, Guillaume Lajoinie, Michel Versluis, and Jacco H. Snoeijer.
J. Acoust. Soc. Am. **155**, 1593–1605 (2024).
<https://doi.org/10.1121/10.0024984>
228. An anthropomorphic thyroid phantom for ultrasound-guided radiofrequency ablation of nodules.
Tim Boers, Wyger Brink, Leonardo Bianchi, Paola Saccomandi, Johan van Hespén, Germen Wennemars, Sicco Braak, Michel Versluis, and Srirang Manohar.
Med. Phys. **51**(2), 826–838 (2024).
<https://doi.org/10.1002/mp.16906>

2023

227. Ultrasound particle image velocimetry to investigate potential hemodynamic causes of limb thrombosis after endovascular aneurysm repair with the Anaconda device.
H. Mirgolbabaee, L. van de Velde, R. H. Geelkerken, M. Versluis, E. Groot Jebbink, M.M.P.J. Reijnen
J. Endovasc. Ther. (on-line, 2023).
<https://doi.org/10.1177/15266028231219988>

226. Dependence of sonoporation efficiency on microbubble size: an in vitro monodisperse microbubble study.
Benjamin van Elburg, Joke Deprez, Martin van den Broek, Stefaan C. De Smedt, Michel Versluis, Guillaume Lajoinie, Ine Lentacker, and Tim Segers.
J. Control. Release **363**, 747–755 (2023).
<https://doi.org/10.1016/j.jconrel.2023.09.047>
225. Microbubble formation by flow-focusing: role of gas and liquid properties, and channel geometry.
Sarah Cleve, Anne Lassus, Christian Diddens, Benjamin van Elburg, Emmanuel Gaud, Samir Cherkaoui, Michel Versluis, Tim Segers, and Guillaume Lajoinie.
J. Fluid Mech. **972**, A27 (2023).
<https://doi.org/10.1017/jfm.2023.704>
224. Coated microbubbles exploit shell buckling to swim.
Georges Chabouh, Marcel Mokbel, Benjamin van Elburg, Michel Versluis, Tim Segers, Sebastian Aland, Catherine Quilliet, and Gwennou Coupier.
Nature Comm. Eng. **2**, 63 (2023).
<https://doi.org/10.1038/s44172-023-00113-z>
223. Computational Fluid Dynamics for the prediction of endograft thrombosis in the superficial femoral artery.
Lennart van de Velde, Erik Groot Jebbink, Rob Hagmeijer, Michel Versluis, and Michel M.P.J. Reijnen.
J. Endovasc. Ther. **30**(4), 615–627 (2023).
<https://doi.org/10.1177/15266028221091890>
222. Selective evaporation at the nozzle exit in piezoacoustic inkjet printing.
Maaike Rump, Uddalok Sen, Roger Jeurissen, Hans Reinten, Michel Versluis, Detlef Lohse, Christian Diddens, and Tim Segers.
Phys. Rev. Appl. **19**, 054056 (2023)
<https://doi.org/10.1103/PhysRevApplied.19.054056>
- selected as Editors' Suggestion.
and see also: *Nature Reviews Physics*
Drying droplets at a printhead nozzle
<https://doi.org/10.1038/s42254-023-00606-y>
221. Ultrasound imaging in thyroid nodule diagnosis, therapy and follow-up: current status and future trends.
T. Boers, S.J. Braak, N.E.T. Rikken, M. Versluis, and S. Manohar.
J. Clin. Ultrasound **2023**, 1-14 (2023).
<https://doi.org/10.1002/jcu.23430>.
- Wiley Top Cited Article.
220. Buckling of lipidic ultrasound contrast agents under quasi-static load.
Georges Chabouh, Benjamin van Elburg, Michel Versluis, Tim Segers, Catherine Quilliet, and Gwennou Coupier.
Phil. Trans. R. Soc. A. **381**, 20220025 (2023).
<https://doi.org/10.1098/rsta.2022.0025>

2022

219. Vorticity-induced flow-focusing leads to bubble entrainment in an inkjet printhead: synchrotron X-ray and volume-of-fluid visualizations.
Maaike Rump, Youssef Saade, Uddalok Sen, Kamel Fezzaa, Michel Versluis, Detlef Lohse, and Tim Segers.
Phys. Rev. Fluids **7**, 104004 (2022).
<https://doi.org/10.1103/PhysRevFluids.7.104004>
218. Irrigant flow in the root canal during ultrasonic activation: a numerical fluid-structure interaction model and its validation.
C. Boutsoukis, B. Verhaagen, L.W.M. van der Sluis, and M. Versluis
Int. Endod. J. **55**, 938-949 (2022).
<https://doi.org/10.1111/iej.13791>

217. Time-resolved absolute radius estimation of vibrating contrast microbubbles using an acoustical camera.
Sander Spiekhou, Jason Voorneveld, Benjamin van Elburg, Guillaume Renaud, Tim Segers, Guillaume P.R. Lajoinie, Michel Versluis, Martin D. Verweij, Nico de Jong, and Johannes G. Bosch.
J. Acoust. Soc. Am. **151**(6), 3993–4003 (2022).
<https://doi.org/10.1121/10.0011619>
216. A theoretical framework for acoustically produced luminescence: from thermometry to ultrasound pressure field mapping.
Simon E. Michels, Guillaume Lajoinie, Saeid Hedayatrasa, Michel Versluis, Mathias Kersemans, and Philippe Smet.
J. Lumin. **248**:118940 (2022).
<https://doi.org/10.1016/j.jlumin.2022.118940>
215. The response of dual-species bacterial biofilm to 2% and 5% NaOCl mixed with etidronic acid: real-time evaluation by optical coherence tomography.
M.M.B. Borges, R.J.B. Dijkstra, F.B. Andrade, M.A.H. Duarte, M. Versluis, L.W.M. van der Sluis, and X. Petridis.
Int. Endod. J. **55**(7), 758–771 (2022).
<https://doi.org/10.1111/iej.13754>
214. Super-resolved microbubble localization in single-channel ultrasound RF signals using deep learning.
Nathan Blanken, Jelmer M. Wolterink, Hervé Delingette, Christoph Brune, Michel Versluis, and Guillaume Lajoinie.
IEEE Trans. Med. Imaging **41**(9), 2532–2542 (2022).
<https://doi.org/10.1109/tmi.2022.3166443>
213. High-frame-rate contrast-enhanced ultrasound particle image velocimetry in patients with a stented superficial femoral artery: a feasibility study.
Majorie van Helvert, Stefan Engelhard, Jason Voorneveld, Marije van der Vee, Johan G. Bosch, Michel Versluis, Erik Groot Jebbink, and Michel M. P. J. Reijnen.
Eur. Radiol. Exp. **6**:32 (2022).
<https://doi.org/10.1186/s41747-022-00278-w>
212. Evaluation of liposome-loaded microbubbles as theranostic tool in murine collagen-induced arthritis.
Joke Deprez, Silke Roovers, Guillaume Lajoinie, Heleen Dewitte, Tine Decruy, Julie Coudenys, Benedicte Descamps, Christian Vanhove, Michel Versluis, Dirk Elewaut, Peggy Jacques, Stefaan C. De Smedt, and Ine Lentacker
Sci. Pharm. **90**(1), 17 (2022)
<https://doi.org/10.3390/scipharm90010017>
211. The Supera interwoven nitinol stent as a flow diverting configuration in popliteal aneurysms.
L. van de Velde, E. Groot Jebbink, B.A. Zambrano, M. Versluis, J. Tessarek, and M.M.P.J. Reijnen.
Cardiovasc. Intervent. Radiol. **45**, 858–866 (2022).
<https://doi.org/10.1007/s00270-022-03118-x>
210. Resonance behavior of a compliant piezo-driven inkjet channel with an entrained microbubble.
Hans Reinten, Yogesh Jethani, Arjan Fraters, Roger Jeurissen, Detlef Lohse, Michel Versluis, and Tim Segers.
J. Acoust. Soc. Am. **151**(4), 2524–2557 (2022).
<https://doi.org/10.1121/10.0009784>
209. Blood flow quantification with high-frame-rate contrast-enhanced ultrasound velocimetry in stented aortoiliac arteries: in vivo feasibility.
Stefan Engelhard, Majorie van Helvert, Jason Voorneveld, Johan G. Bosch, Guillaume Lajoinie, Erik Groot Jebbink, Michel M.P.J. Reijnen, and Michel Versluis.
Ultrasound Med. Biol. **48**(8), 1518–1527 (2022).
<https://doi.org/10.1016/j.ultrasmedbio.2022.03.016>

2021

208. Time-resolved velocity and pressure field quantification in a flow-focusing device for ultrafast microbubble production.
Sarah Cleve, Christian Diddens, Tim Segers, Guillaume Lajoinie, and Michel Versluis.
Phys. Rev. Fluids **6**, 114202 (2021).
<https://doi.org/10.1103/PhysRevFluids.6.114202>
207. Meniscus oscillations driven by flow-focusing leading to bubble pinch-off and entrainment in a piezo-acoustic inkjet nozzle
Arjan Fraters, Maaïke Rump, Roger Jeurissen, Marc van den Berg, Youri de Loore, Hans Reinten, Herman Wijshoff, Devaraj van der Meer, Detlef Lohse, Michel Versluis, and Tim Segers.
Phys. Rev. Appl. **16**, 044052 (2021).
<https://doi.org/10.1103/PhysRevApplied.16.044052>
206. The retraction of jetted slender viscoelastic liquid filaments.
Uddalok Sen, Charu Datt, Tim Segers, Herman Wijshoff, Jacco Snoeijer, Michel Versluis, and Detlef Lohse.
J. Fluid Mech. **929**, A25 (2021).
<https://doi.org/10.1017/jfm.2021.855>
205. Ultrasound velocimetry in participants with aortoiliac occlusive disease.
Stefan Engelhard, Majorie van Helvert, Jason Voorneveld, Johan G. Bosch, Guillaume Lajoinie, Michel Versluis, Erik Groot Jebbink, and Michel M.P.J. Reijnen.
Radiology **301**(2), 332–338 (2021).
<https://doi.org/10.1148/radiol.2021210454>
204. Matrix 3D ultrasound-assisted thyroid nodule volume estimation and RF ablation: a phantom study.
Tim Boers, Sicco J. Braak, Michel Versluis, and Srirang Manohar.
Eur. Radiol. Exp. **5**:31 (2021).
<https://doi.org/10.1186/s41747-021-00230-4>
203. Blood flow quantification in peripheral arterial disease: emerging diagnostic techniques in vascular surgery (review).
Stefan Engelhard, Lennart van de Velde, Erik Groot Jebbink, Kartik Jain, Jos Westenberg, Clark J. Zeebregts, Michel Versluis, and Michel M.P.J. Reijnen.
Surg. Technol. Int. **38**, 1410 (2021)
<https://doi.org/10.52198/21.sti.38.cv1410>
202. Hemodynamic comparison of AFX stent-graft and CERAB configuration for treatment of aortoiliac occlusive disease.
Albert Chong, Hadi Mirgolbabaee, Zhonghua Sun, Lennart van de Velde, Shirley Jansen, Barry Doyle, Michel Versluis, Michel M.P.J. Reijnen, and Erik Groot Jebbink.
J. Endovasc. Ther. **28**(4), 623–635 (2021).
<https://doi.org/10.1177/15266028211016431>
201. Fast and high-resolution ultrasound pressure field mapping using luminescent membranes.
Simon E. Michels, Mathias Kersemans, Michel Versluis, Guillaume Lajoinie and Philippe F. Smet.
Adv. Opt. Mater. **2021**, 2100085 (2021).
<https://doi.org/10.1002/adom.202100085>
200. Feedback-controlled microbubble generator producing one million monodisperse bubbles per second.
Benjamin van Elburg, Gonzalo Collado Lara, Gert-Wim Bruggert, Tim Segers, Michel Versluis and Guillaume Lajoinie.
Rev. Sci. Instrum. **92**, 035110 (2021).
<https://doi.org/10.1063/5.0032140>
199. Multi-time-scale microscopy methods for the characterization of fluorescently-labeled microbubbles aimed at ultrasound-triggered drug release.
Charlotte Nawijn, Tim Segers, Guillaume Lajoinie, Ýrr Mørch, Sigrid Berg, Sofie Snipstad, Catharina de Lange Davies, and Michel Versluis.
J. Vis. Exp. **172**, e62251 (2021).
<https://doi.org/10.3791/62251>

198. Biofilm removal from an artificial isthmus and lateral canal during syringe irrigation at various flow rates: A combined experimental and Computational Fluid Dynamics approach.
T.C. Pereira, C. Boutsoukis, R.J.B. Dijkstra, X. Petridis, M. Versluis, F.B. de Andrade, W.J. van de Meer, P. Sharma, L.W.M. van der Sluis, and M.V.R. So.
Int. Endod. J. **54**, 427–438 (2021).
<https://doi.org/10.1111/iej.13420>
197. High-frequency acoustic droplet vaporization is initiated by resonance.
Guillaume Lajoinie, Tim Segers and Michel Versluis.
Phys. Rev. Lett. **126**, 034501 (2021).
<https://doi.org/10.1103/PhysRevLett.126.034501>
- selected as Editors' Suggestion.

2020

196. Evaporation-induced crystallization of surfactants in sessile multicomponent droplets.
Yaxing Li, Valentin Salvator, Herman Wijshoff, Michel Versluis, and Detlef Lohse.
Langmuir **36**, 7545–7552 (2020).
<https://doi.org/10.1021/acs.langmuir.0c01169>
195. Evaporating droplets on oil-wetted surfaces: suppression of the coffee-stain effect.
Yaxing Li, Christian Diddens, Tim Segers, Herman Wijshoff, Michel Versluis, and Detlef Lohse.
Proc. Natl. Acad. Sci. USA **117**, 16763 (2020).
<https://doi.org/10.1073/pnas.2006153117>
194. Rayleigh-Taylor instability by segregation in an evaporating multicomponent microdroplet.
Yaxing Li, Christian Diddens, Tim Segers, Herman Wijshoff, Michel Versluis, and Detlef Lohse.
J. Fluid Mech. **899**, A22 (2020).
<https://doi.org/10.1017/jfm.2020.449>
193. Focused ultrasound for opening blood-brain barrier and drug delivery monitored with positron emission tomography.
Wejdan M. Arif, Philip H. Elsinga, Carmen Gasca-Salas, Michel Versluis, Raúl Martínez-Fernández, Rudi A.J.O. Dierckx, Ronald J.H. Borra and Gert Luurtsema.
J. Control. Release **324**, 303–316 (2020).
<https://doi.org/10.1016/j.jconrel.2020.05.020>
192. Three-phase vaporization theory for laser-activated microcapsules.
Guillaume Lajoinie, Mirjam Visscher, Emilie Blazejewski, Gert Veldhuis, and Michel Versluis.
Photoacoustics **19**, 100185 (2020).
<https://doi.org/10.1016/j.pacs.2020.100185>
191. Non-axisymmetric effects in drop-on-demand piezo-acoustic inkjet printing.
Mark-Jan van der Meulen, Hans Reinten, Herman Wijshoff, Michel Versluis, Detlef Lohse, and Paul Steen.
Phys. Rev. Appl. **13**, 054071 (2020).
<https://doi.org/10.1103/PhysRevApplied.13.054071>
190. Ultrasound contrast agents modeling: a review.
Michel Versluis, Eleanor Stride, Guillaume Lajoinie, Benjamin Dollet, and Tim Segers.
Ultrasound Med. Biol. **46**, 2117–2144 (2020).
<https://doi.org/10.1016/j.ultrasmedbio.2020.04.014>
189. Foam-free monodisperse lipid-coated ultrasound contrast agent synthesis by flow-focusing through multi-gas-component microbubble stabilization.
Tim Segers, Emmanuel Gaud, Gilles Casqueiro, Anne Lassus, Michel Versluis, and Peter Frinking.
Appl. Phys. Lett. **116**, 173701 (2020).
<https://doi.org/10.1063/5.0003722>
see also: American Institute of Physics Scilight
Method developed for creating foam-free monodisperse bubbles as ultrasound contrast agents
<https://doi.org/10.1063/10.0001213>

188. Microfluidics control the ballistic energy of thermocavitation liquid jets for needle-free injections. Loreto Oyarte Gálvez, Arjan Fraters, Herman Offerhaus, Michel Versluis, Ian Hunter, and David Fernandez Rivas. *J. Appl. Phys.* **127**, 104901 (2020).
<https://doi.org/10.1063/1.5140264>
187. A novel roller pump for physiological flow. Albert Chong, Zhonghua Sun, Lennart van de Velde, Shirley Jansen, Michel Versluis, Michel M.P.J. Reijnen, and Erik Groot Jebbink. *Artificial Organs.* **44**, 818–826 (2020).
<https://doi.org/10.1111/aor.13670>
186. Microbubble Agents: New Directions (review). Eleanor Stride, Tim Segers, Guillaume Lajoinie, Samir Cherkaoui, Thierry Bettinger, Michel Versluis, and Mark Borden. *Ultrasound Med. Biol.* **46**, 1326–1343 (2020).
<https://doi.org/10.1016/j.ultrasmedbio.2020.01.027>
185. Validation of a novel methodology to evaluate changes in the flare geometry of renovisceral bridging stent-grafts after fenestrated endovascular aneurysm repair. S.P. Overeem, R.C.L. Schuurmann, M. Schumacher, M.F.C. Jolink, M. Ketel, B. Nijendijk, C.H. Slump, M. Versluis, and J.P.P.M. de Vries. *J. Endovasc. Ther.* **27**, 436–444 (2020).
<https://doi.org/10.1177/1526602820915932>
184. Secondary tail formation and breakup in piezo-acoustic inkjet printing: femtoliter droplets captured in flight. Arjan Fraters, Roger Jeurissen, Marc van den Berg, Hans Reinten, Herman Wijshoff, Detlef Lohse, Michel Versluis, and Tim Segers. *Phys. Rev. Appl.* **13**, 024075 (2020).
<https://doi.org/10.1103/PhysRevApplied.13.024075>

2019

183. Ultrasound-sensitive liposomes for triggered macromolecular drug delivery. Maria De Matos, Roel Deckers, Guillaume Lajoinie, Benjamin van Elburg, Michel Versluis, Raymond Schiffelers, and Robbert Jan Kok. *Frontiers Pharmacology* **10**, 1463 (2019).
doi:10.3389/fphar.2019.01463
182. Sonoprinting liposomes on tumor spheroids by microbubbles and ultrasound. Silke Roovers, Joke Deprez, Dwi Priwitaningrum, Guillaume Lajoinie, Nicolas Rivron, Heidi Declercq, Olivier De Wever, Eleanor Stride, Séverine Le Gac, Michel Versluis, Jai Prakash, Ine Lentacker, and Stefaan De Smedt. *J. Control. Release* **316**, 79–92 (2019).
doi:10.1016/j.jconrel.2019.10.051
181. Inkjet nozzle failure by heterogeneous nucleation: bubble entrainment, cavitation, and diffusive growth. Arjan Fraters, Marc van den Berg, Youri de Loore, Hans Reinten, Herman Wijshoff, Detlef Lohse, Michel Versluis, and Tim Segers. *Phys. Rev. Applied* **12**, 064019 (2019).
doi:10.1103/PhysRevApplied.12.064019
- selected as Editors' Suggestion.
180. Shortwave infrared imaging setup to study entrained air bubble dynamics in a MEMS-based piezo-acoustic inkjet printhead. Arjan Fraters, Tim Segers, Marc van den Berg, Hans Reinten, Herman Wijshoff, Detlef Lohse, and Michel Versluis. *Exp. Fluids* **60**:123 (2019).
doi:10.1007/s00348-019-2772-8

179. Sonoprinting of nanoparticle-loaded microbubbles: unraveling the multi-timescale mechanism. Silke Roovers, Guillaume Lajoinie, Ine De Cock, Toon Brans, Heleen Dewitte, Kevin Braeckmans, Michel Versluis, Stefaan De Smedt, and Ine Lentacker. *Biomaterials* **217**, 119250 (2019). doi:10.1016/j.biomaterials.2019.119250
178. Microdroplets nucleation by dissolution of a multicomponent drop in a host liquid. Huanshu Tan, Christian Diddens, Ali Mohammed, Junyi Li, Michel Versluis, Xuehua Zhang, and Detlef Lohse. *J. Fluid Mech.* **870**, 217–246 (2019). doi:10.1017/jfm.2019.207
177. Multicore liquid perfluorocarbon-loaded multimodal nanoparticles for stable ultrasound and ¹⁹F MRI applied to in-vivo cell tracking. Olga Koshkina, Guillaume Lajoinie, Francesca Baldelli Bombelli, Edyta Swider, Luis Cruz, Paul White, Ralph Schweins, Yusuf Dolen, Eric van Dinther, N. Koen van Riessen, Sarah Rogers, Remco Fokkink, Ilja Voets, Ernst van Eck, Arend Heerschap, Michel Versluis, Chris de Korte, Carl Figdor, I. Jolanda M. De Vries, and Mangala Srinivas. *Adv. Funct. Mater.* **29**, 1806485 (2019) doi:10.1002/adfm.201806485
176. Assessment of changes in stent graft geometry after chimney EVAS. S.P. Overeem, S.R. Goudeketting, R.C.L. Schuurmann, J.M. Heyligers, H.J.M. Verhagen, M. Versluis, and J.P.P.M. de Vries *J. Vasc. Surg.* **70**(6), 1754–1764 (2019). doi: 10.1016/j.jvs.2019.02.058
see also: Invited Commentary by Timothy A. Resch *J. Vasc. Surg.* **70**, 1765 (2019). doi: 10.1016/j.jvs.2019.03.068
175. Gravitational effect in evaporating binary microdroplets. Yaxing Li, Christian Diddens, Pengyu Lv, Herman Wijshoff, Michel Versluis, and Detlef Lohse. *Phys. Rev. Lett.* **122**, 114501 (2019). doi:10.1103/PhysRevLett.122.114501
174. The role of ultrasound-driven microbubble dynamics in drug delivery: from microbubble fundamentals to clinical translation (review). Silke Roovers, Tim Segers, Guillaume Lajoinie, Michel Versluis, Stefaan De Smedt, and Ine Lentacker. *Langmuir* **35**, 10173–10191 (2019). doi:10.1021/acs.langmuir.8b03779
173. Laser-activated microparticles for multimodal imaging: ultrasound and photoacoustics. Mirjam Visscher, Guillaume Lajoinie, Emilie Blazejewski, Gert Veldhuis, and Michel Versluis. *Phys. Med. Biol.* **64**(3), 034001 (2019). doi:10.1088/1361-6560/aaf4a2
172. Haemodynamics in different flow lumen configurations of Customized Aortic Repair for infrarenal aortic aneurysms. S.P. Overeem, J.P.P.M. de Vries, J.T. Boersen, C.H. Slump, M.M.P.J. Reijnen, M. Versluis, and E. Groot Jebbink. *Eur. J. Vasc. Endovasc. Surg.* **57**(5), 709–718 (2019). doi: 10.1016/j.ejvs.2018.11.012
171. Meta-analysis of individual patient data after kissing stent treatment for aortoiliac occlusive disease. Erik Groot Jebbink, Suzanne Holewijn, Michel Versluis, Frederike A.B. Grimme, Jan Willem Hinnen, Sebastiaan Sixt, John F. Angle, Walter Dorigo, and Michel M.P.J. Reijnen. *J. Endovasc. Ther.* **26**(1), 31–40 (2019). doi:10.1177/1526602818810535

2018

170. High-precision acoustic measurements of the non-linear dilatational elasticity of phospholipid-coated monodisperse microbubbles.
Tim Segers, Emmanuel Gaud, Michel Versluis, and Peter Frinking.
Soft Matter **14**, 9550–9561 (2018).
doi:10.1039/c8cm00918j
see also: Back Cover
Soft Matter **14**, 9732 (2018)
doi:10.1039/c8sm90238k
169. Giant and explosive plasmonic bubbles by delayed nucleation.
Yuliang Wang, Mikhail E. Zaytsev, Guillaume Lajoinie, Hai Le The, Jan C. T. Eijkel, Albert van den Berg, Michel Versluis, Bert M. Weckhuysen, Xuehua Zhang, Harold J. W. Zandvliet, and Detlef Lohse.
Proc. Natl. Acad. Sci. USA **115** (30), 7676–7681 (2018).
doi:10.1073/pnas.1805912115
168. High-frame-rate contrast-enhanced US particle image velocimetry in the abdominal aorta: first human results.
Stefan Engelhard, Jason Voorneveld, Hendrik J. Vos, Jos J.M. Westenberg, Frank J.H. Gijzen, Pavel Taimr, Michel Versluis, Nico de Jong, Johan G. Bosch, Michel M.P.J. Reijnen, and Erik Groot Jebbink.
Radiology **289** (1), 119–125 (2018).
doi:10.1148/radiol.2018172979
see also: Editorial by Glen Morrell
Radiology 289, 126–127 (2018).
doi.org/10.1148/radiol.2018181175
167. High-frame rate contrast-enhanced ultrasound for velocimetry in the human abdominal aorta.
J. Voorneveld, S. Engelhard, H.J. Vos, M.M.P.J. Reijnen, F. Gijzen, M. Versluis, E. Groot Jebbink, N. de Jong, and J.G. Bosch.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **65**(12), 2245–2254 (2018).
doi:10.1109/tuffc.2018.2846416
166. Evaporation-triggered segregation of sessile binary droplets.
Yaxing Li, Pengyu Lv, Christian Diddens, Huanshu Tan, Herman Wijshoff, Michel Versluis, and Detlef Lohse.
Phys. Rev. Lett. **120**, 224501 (2018).
doi:10.1103/PhysRevLett.120.224501
165. Non-spherical oscillations drive the ultrasound-mediated release from targeted microbubbles.
Guillaume Lajoinie, Ying Luan, Erik Gelderblom, Benjamin Dollet, Frits Mastik, Ine Lentacker, Heleen Dewitte, Nico de Jong, and Michel Versluis.
Nature Comm. Phys. **1**, 22 (2018).
doi:10.1038/s42005-018-0020-9
- selected as first year anniversary Editors' Pick.
164. Layered acoustofluidic resonators for the simultaneous optical and acoustic characterization of cavitation dynamics, microstreaming and biological effects.
V. Pereno, M. Aron, O. Vince, C. Mannaris, A. Seth, M. de Saint Victor, G. Lajoinie, M. Versluis, C. Coussios, D. Carugo, and E. Stride.
Biomicrofluidics **12**, 034109 (2018).
doi:10.1063/1.5023729
- selected as the AIP Editor's Pick.
163. Monodisperse versus polydisperse ultrasound contrast agents: nonlinear response, sensitivity, and deep tissue imaging potential.
Tim Segers, Pieter Kruizinga, Maarten P. Kok, Guillaume Lajoinie, Nico de Jong, and Michel Versluis.
Ultrasound Med. Biol. **44**(7), 1482–1492 (2018).
doi:10.1016/j.ultrasmedbio.2018.03.019

162. Three-year outcome of the covered endovascular reconstruction of the aortic bifurcation technique for aortoiliac occlusive disease.
Kim Taeymans, Erik Groot Jebbink, Suzanne Holewijn, Jasper M. Martens, Michel Versluis, Peter C.J.M. Goverde, and Michel M.P.J. Reijnen.
J. Vasc. Surg. **67**(5), 1438–1447 (2018).
doi:10.1016/j.jvs.2017.09.015
161. Partial renal coverage in EVAR causes unfavorable renal flow patterns in an infrarenal aneurysm model.
Lennart van de Velde, Esmé J. Donselaar, Erik Groot Jebbink, Johannes T. Boersen, Guillaume P.R. Lajoinie, Jean-Paul P.M. de Vries, Clark J. Zeebregts, Michel Versluis, and Michel M.P.J. Reijnen.
J. Vasc. Surg. **67**(5), 1585–1594 (2018).
doi:10.1016/j.jvs.2017.05.092
160. Acoustic characterization of a vessel-on-a-chip microfluidic system for ultrasound-mediated drug delivery.
Inés Beekers, Tom van Rooij, Martin Verweij, Michel Versluis, Nico de Jong, Sebastiaan Trietsch, and Klazina Kooiman.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **65**(4), 570–581 (2018).
doi:10.1109/tuffc.2018.2803137
159. Cleaning lateral morphological features of the root canal: the role of streaming and cavitation.
J.P. Robinson, R.G. Macedo, B. Verhaagen, M. Versluis, P.R. Cooper, L.W.M. van der Sluis, and A.D. Walmsley.
Int. Endod. J. **51**, e55–e64 (2018).
doi:10.1111/iej.12804
158. Optical verification and in-vitro characterization of two commercially available acoustic bubble counters for cardiopulmonary bypass system.
Tim Segers, Marco C. Stehouwer, Filip M.J.J. de Somer, Bastian A. de Mol, and Michel Versluis.
Perfusion **33**, 16–24 (2018).
doi: 10.1177/0267659117722595
157. Brandaris ultra high-speed imaging facility.
Guillaume Lajoinie, Nico de Jong and Michel Versluis.
in “The micro-world observed by ultra high-speed cameras”, K. Tsuji (Editor).
ISBN 978-3-319-61490-8
Springer International Publishing (2018).
doi:10.1007/978-3-319-61491-5_3

2017

156. Universal equations for the coalescence probability and long-term size stability of phospholipid-coated monodisperse microbubbles formed by flow-focusing
Tim Segers, Detlef Lohse, Michel Versluis, and Peter Frinking.
Langmuir **33**, 10329–10339 (2017).
doi:10.1021/acs.langmuir.7b02547
155. Apparatus to control and visualize the impact of a high-energy laser pulse on a liquid target.
Alexander L. Klein, Detlef Lohse, Michel Versluis, and Hanneke Gelderblom.
Rev. Sci. Instrum. **88**, 095102 (2017).
doi:10.1063/1.4989634
154. Oblique drop impact onto a deep liquid pool.
Marise V. Gielen, Pascal Sleutel, Jos Benschop, Michel Riepen, Victoria Voronina, Detlef Lohse, Jacco H. Snoeijer, Michel Versluis, and Hanneke Gelderblom.
Phys. Rev. Fluids **2**, 083602 (2017).
doi:10.1103/PhysRevFluids.2.083602
153. On the dynamics of StemBells: microbubble-conjugated stem cells for ultrasound controlled delivery.
Tom Kokhuis, Benno A. Naaijken, Lynda J.M. Juffermans, Otto Kamp, Antonius F.W. van der Steen, Michel Versluis, and Nico de Jong.
Appl. Phys. Lett. **111**, 023701 (2017).
doi:10.1063/1.4993172

152. Influence of iliac stenotic lesions on endovascular flow patterns near the CERAB configuration. Erik Groot Jebbink, Stefan Engelhard, Guillaume Lajoinie, Michel Versluis, and Michel Reijnen. *J. Endovasc. Ther.* **24**, 800-808 (2017).
doi:10.1177/1526602817732952
151. Focal areas of increased lipid concentration on the coating of microbubbles during short tone-burst ultrasound insonification. Klazina Kooiman, Tom van Rooij, Bin Qin, Frits Mastik, Hendrik J. Vos, Michel Versluis, Alexander L. Klibanov, Nico de Jong, Flordeliza S. Villanueva, and Xucai Chen. *PLoS ONE* **12**(7): e0180747 (2017).
doi:10.1371/journal.pone.0180747
150. Evaporating pure, binary & ternary droplets: thermal effects & axial symmetry breaking. Christian Diddens, Huanshu Tan, Pengyu Lv, Michel Versluis, J.G.M. Kuerten, Xuehua Zhang, and Detlef Lohse. *J. Fluid. Mech.* **823**, 470–497 (2017).
doi:10.1017/jfm.2017.312
149. Laser-driven resonance of dye-doped oil-coated microbubbles: experimental study. Guillaume Lajoinie, Jeong-Yu Lee, Joshua Owen, Pieter Kruizinga, Nico de Jong, Gijs van Soest, Eleanor Stride, and Michel Versluis. *J. Acoust. Soc. Am.* **141**, 4832–4846 (2017).
doi:10.1121/1.4985560
148. Laser-activated polymeric microcapsules for ultrasound imaging and therapy: in vitro feasibility. G. Lajoinie, T. van Rooij, I. Skachkov, E. Blazejewski, G. Veldhuis, N. de Jong, K. Kooiman, and M. Versluis. *Biophys. J.* **112**, 1894–1907 (2017).
doi:10.1016/j.bpj.2017.03.033
147. The influence of infrarenal neck diameter and positioning of the Nellix EVAS endosystem on suprarenal and renal flow: an in-vitro study. J.T. Boersen, E. Groot Jebbink, L. van de Velde, G. Lajoinie, M. Versluis, C.H. Slump, D.N. Ku, J.P.P.M. de Vries, and M.M.P.J. Reijnen. *J. Endovasc. Ther.* **24**, 677–687 (2017).
doi:10.1177/1526602817719465
146. Laser-driven resonance of dye-doped oil-coated microbubbles: a theoretical and numerical study. Guillaume Lajoinie, Erik Linnartz, Pieter Kruizinga, Nico de Jong, Eleanor Stride, Gijs van Soest, and Michel Versluis. *J. Acoust. Soc. Am.* **141**, 2727–2745 (2017).
doi:10.1121/1.4979257
145. Self-wrapping of an ouzo drop induced by evaporation on a superamphiphobic surface. Huanshu Tan, Christian Diddens, Michel Versluis, Hans-Jürgen Butt, Detlef Lohse, and Xuehua Zhang. *Soft Matter* **13**, 2749-2759 (2017).
doi:10.1039/c6sm02860h
see also: Inside Front Cover
Soft Matter **13**, 2720 (2017)
doi:10.1039/c7sm90064c
144. Temperature evolution of pre-heated irrigant injected into a root canal ex-vivo. Ricardo Macedo, Bram Verhaagen, Michel Versluis, and Luc van der Sluis. *Clin. Oral Invest.* **21**, 2841–2850 (2017).
doi:10.1007/s00784-017-2086-2
143. Flow and wall shear stress characterization following endovascular aneurysm repair and endovascular aneurysm sealing in an infrarenal aneurysm model. Johannes T. Boersen, Erik Groot Jebbink, Michel Versluis, Cornelis H. Slump, David N. Ku, Jean-Paul P.M. de Vries, and Michel M.P.J. Reijnen. *J. Vasc. Surg.* **66**, 1844–1853 (2017).
doi:10.1016/j.jvs.2016.10.077

142. Ultrafast imaging method to measure surface tension and viscosity of inkjet printed droplets in flight.
Hendrik J.J. Staat, Arjan van der Bos, Marc van den Berg, Hans Reinten, Herman Wijshoff, Michel Versluis, and Detlef Lohse.
Exp. Fluids **58**:2 (2017).
doi:10.1007/s00348-016-2284-8
141. Hemodynamic comparison of stent configurations used for aortoiliac occlusive disease.
Erik Groot Jebbink, Varghese Mathai, Jorrit Boersen, Chao Sun, Kees Slump, Peter C.J.M. Goverde, Michel Versluis, and Michel M.P.J. Reijnen.
J. Vasc. Surg. **66**, 251–260 (2017).
doi:10.1016/j.jvs.2016.07.128

2016

140. Combined optical sizing and acoustical characterization of single freely-floating microbubbles.
Ying Luan, Guillaume Renaud, Jason L. Raymond, Tim Segers, Guillaume Lajoinie, Robert Beurskens, Frits Mastik, Tom J.A. Kokhuis, Antonius F.W. van der Steen, Michel Versluis, and Nico de Jong.
Appl. Phys. Lett. **109**, 234104 (2016).
139. Loss of gas from echogenic liposomes exposed to pulsed ultrasound.
Jason L. Raymond, Ying Luan, Tao Peng, Shao-Ling Huang, David D. McPherson, Michel Versluis, Nico de Jong, and Christy K. Holland.
Phys. Med. Biol. **61**, 8321–8339 (2016).
- selected by the Editors as a PMB Highlight of 2016.
138. Ballistic energy conversion: physical modeling and optical characterization.
Yanbo Xie, Diederik Bos, Mark-Jan van der Meulen, Michel Versluis, Albert van den Berg, and Jan C.T. Eijkel.
Nano Energy **30**, 252–259 (2016).
137. Uniform scattering and attenuation of acoustically sorted ultrasound contrast agents: modeling and experiments.
Tim Segers, Nico de Jong, and Michel Versluis.
J. Acoust. Soc. Am. **140**, 2506–2517 (2016).
136. Ultra high-speed dynamics of micron-sized inertial cavitation from nanoparticles.
James J. Kwan, Guillaume Lajoinie, Nico de Jong, Eleanor Stride, Michel Versluis, and Constantin C. Coussios.
Phys. Rev. Applied **6**, 044004 (2016).
135. Redox control of capillary filling speed in poly(ferrocenylsilane)-modified microfluidic channels for switchable delay valves.
Lionel Dos Ramos, Guillaume Lajoinie, Bernard D. Kieviet, Sissi de Beer, Michel Versluis, Mark A. Hempenius, and G. Julius Vancso.
Eur. Polym. J. **83**, 507–516 (2016).
134. Experimental techniques for retrieving flow information from within inkjet nozzles.
Mark-Jan van der Meulen, Hans Reinten, Frits Dijkstra, Detlef Lohse, and Michel Versluis.
J. Imaging Sci. Technol. **60**, 40502 (2016).
133. On the stability of monodisperse phospholipid-coated microbubbles formed by flow-focusing at high production rates.
Tim Segers, Leonie de Rond, Nico de Jong, Mark Borden, and Michel Versluis.
Langmuir **32**, 3937–3944 (2016).
132. The role of Irrigation in Endodontics.
L. van der Sluis, B. Verhaagen, R. Macedo and M. Versluis.
in 'Lasers in Endodontics'.
Giovanni Olivi, Roeland de Moor, and Enrico DiVito (Editors).
ISBN 978-3-319-19326-7, Springer International Publishing (2016).
131. In vitro analysis of gas bubble formation and its effect on impedance during electroporation ablation.
R. van Es, J. Vink, G. Lajoinie, M. Versluis, I. Byrd, K. Neven, P. Doevendans, and F. Wittkamp.
Europace **18**: i141 (2016).

130. Study of the geometry in a 3D flow-focusing device.
Elena Castro-Hernández, Maarten P. Kok, Michel Versluis, and David Fernández-Rivas.
Microfluid Nanofluid **20**:40 (2016).
129. *In vitro* methods to study bubble-cell interactions: fundamentals, and therapeutic applications (review).
Guillaume Lajoinie, Ine De Cock, Constantin C. Coussios, Ine Lentacker, Séverine Le Gac, Eleanor Stride, and Michel Versluis.
Biomicrofluidics **10**, 011501 (2016).
128. Sonoprinting and the importance of microbubble loading for the ultrasound mediated delivery of nanoparticles.
Ine De Cock, Guillaume Lajoinie, Michel Versluis, Stefaan C. De Smedt, and Ine Lentacker.
Biomaterials **83**, 294–307 (2016).
127. Droplets, Bubbles and Ultrasound Interactions.
Oleksandr Shpak, Martin Verweij, Nico de Jong, and Michel Versluis.
in 'Therapeutic Ultrasound', *Advances in Experimental Medicine and Biology* 880,
J.-M. Escoffre, A. Bouakaz (Editors).
ISBN 978-3-319-22535-7, Springer International Publishing (2016).

2015

126. Root canal irrigation.
Luc van der Sluis, Christos Boutsoukias, Lei-Meng Jiang, Ricardo Macedo, Bram Verhaagen, and Michel Versluis.
in 'The Root Canal Biofilm', *Springer Series on Biofilms* 9.
Luis E. Chávez de Paz, Christine M. Sedgley and Anil Kishen (Editors).
ISBN 978-3-662-47414-3, Springer-Verlag Berlin Heidelberg (2015).
125. Bubble sorting in pinched microchannels for ultrasound contrast agent enrichment.
Maarten P. Kok, Tim Segers, and Michel Versluis.
Lab Chip **15**, 3716–3722 (2015).
124. Impulse response method for characterization of echogenic liposomes.
Jason L. Raymond, Ying Luan, Tom van Rooij, Klazina Kooiman, Shao-Ling Huang, David D. McPherson, Michel Versluis, Nico de Jong, and Christy K. Holland.
J. Acoust. Soc. Am. **137**, 1693–1703 (2015).
123. Nonlinear response and viscoelastic properties of lipid-coated microbubbles: DSPC vs. DPPC.
Tom van Rooij, Ying Luan, Guillaume Renaud, Antonius F.W. van der Steen, Michel Versluis, Nico de Jong, and Klazina Kooiman.
Ultrasound Med. Biol. **41**, 1432–1445 (2015).
122. Microbubbles for Medical Applications.
Tim Segers, Nico de Jong, Detlef Lohse, and Michel Versluis.
in 'Microfluidics for Medicine'.
Albert van den Berg and Loes Segerink (Eds.),
RSC Nanoscience and Nanotechnology Series.
ISBN: 978-1-84973-637-4, The Royal Society of Chemistry (2015).
121. Enhancing acoustic cavitation using artificial crevice bubbles.
Aaldert Zijlstra, David Fernandez Rivas, Han J.G.E. Gardeniers, Michel Versluis, and Detlef Lohse.
Ultrasonics **56**, 512–523 (2015).
120. Intravital microscopy of localized stem cell delivery using microbubbles and acoustic radiation force.
T.J.A. Kokhuis, I. Skachkov, B.A. Naaijken, L.J.M. Juffermans, O. Kamp, K. Kooiman, A.F.W. van der Steen, M. Versluis, and N. de Jong.
Biotechnol. Bioeng. **112**, 220–227 (2015).

2014

119. A novel methodology providing new insights into the ultrasonic removal of a biofilm-mimicking hydrogel from lateral morphological features of the root canal during irrigation procedures.
R.G. Macedo, J.P. Robinson, B. Verhaagen, A.D. Walmsley, M. Versluis, P.R. Cooper, and L.W.M. van der Sluis.
Int. Endod. J. **47**, 1040–1051 (2014).
118. Disinfection of the root canal by sonic, ultrasonic and laser-activated irrigation.
Luc van der Sluis, Bram Verhaagen, Ricardo Macedo, and Michel Versluis.
in 'Disinfection of Root Canal Systems: The Treatment of Apical Periodontitis'.
Nestor Cohenca (Editor).
ISBN: 978-1-118-36768-1, Wiley-Blackwell (1st Edition, September 2014).
117. Irrigant transport into dental lateral microchannels.
B. Verhaagen, C. Boutsoukis, C.P. Sleutel, E. Kastrinakis, L.W.M. van der Sluis, and M. Versluis
Microfluid Nanofluid **16**, 1165–1177 (2014).
116. Influence of the dentinal wall on the pH of NaOCl during root canal irrigation.
Ricardo G. Macedo, Noemi Pascual Herrero, Paul R. Wesselink, Michel Versluis, and Luc van der Sluis.
J. Endodont. **40**, 1005–1008 (2014).
115. Lipid shedding from single oscillating microbubbles.
Ying Luan, Guillaume Lajoinie, Erik Gelderblom, Ilya Skachkov, Antonius van der Steen, Hendrik Vos, Michel Versluis, and Nico de Jong.
Ultrasound Med. Biol. **40**, 1834–1846 (2014).
114. Acoustic behavior of microbubbles and implications for drug delivery (review).
Klazina Kooiman, Hendrik J. Vos, Michel Versluis, and Nico de Jong.
Adv. Drug Deliv. Rev. **72**, 28–48 (2014).
113. On the acoustic properties of vaporized submicron perfluorocarbon droplets.
Nikita Reznik, Guillaume Lajoinie, Oleksandr Shpak, Erik C. Gelderblom, Ross Williams, Nico de Jong, Michel Versluis, and Peter N. Burns.
Ultrasound Med. Biol. **40**, 1379–1384 (2014).
112. Ultrafast vaporization dynamics of laser-activated polymeric microcapsules.
Guillaume Lajoinie, Erik Gelderblom, Ceciel Chlon, Marcel Böhmer, Wiendelt Steenbergen, Nico de Jong, Srirang Manohar, and Michel Versluis.
Nature Commun. **5**, 3671 (2014).
111. Acoustic bubble sorting for ultrasound contrast agent enrichment.
Tim Segers and Michel Versluis.
Lab Chip **14**, 1705–1714 (2014).
110. Acoustic streaming induced by an ultrasonically oscillating endodontic file.
B. Verhaagen, C. Boutsoukis, L.W.M. van der Sluis, and M. Versluis.
J. Acoust. Soc. Am. **135**, 1717–1730 (2014).
109. High-efficiency ballistic electrostatic generator using microdroplets.
Yanbo Xie, Diederik Bos, Lennart J. de Vreede, Hans L. de Boer, Mark-Jan van der Meulen, Michel Versluis, Ad J. Sprenkels, Albert van den Berg, and Jan C.T. Eijkel.
Nature Commun. **5**, 3575 (2014).
108. Cavitation measurement during sonic and ultrasonic activated irrigation.
Ricardo G. Macedo, Bram Verhaagen, David Fernandez Rivas, Michel Versluis, Paul R. Wesselink, and Lucas van der Sluis
J. Endodont. **40**, 580–583 (2014).
107. Velocity profile inside a piezo-acoustic inkjet droplets in flight: Comparison between experiment and numerical simulation
Arjan van der Bos, Mark-Jan van der Meulen, Theo Driessen, Marc van den Berg, Hans Reinten, Herman Wijshoff, Michel Versluis, and Detlef Lohse
Phys. Rev. Appl. **1**, 014004 (2014).
see also: Nature Research Highlights:
Fast imaging captures falling droplets
Nature **507**, 142 (2014)

106. Acoustic droplet vaporization is initiated by superharmonic focusing.
Oleksandr Shpak, Martin Verweij, Rik Vos, Nico de Jong, Detlef Lohse, and Michel Versluis.
Proc. Natl. Acad. Sci. USA **111**, 1697-1702 (2014).
105. Formation and removal of apical vapor lock during syringe irrigation: a combined experimental and Computational Fluid Dynamics approach.
C. Boutsoukis, E. Kastrinakis, T. Lambrianidis, B. Verhaagen, M. Versluis, and L.W.M. van der Sluis
Int. Endod. J. **47**, 191–201 (2014).
104. Influence of refreshment/activation cycles and temperature rise on the reaction rate of sodium hypochlorite with bovine dentine during ultrasonic activated irrigation.
Ricardo Macedo, Bram Verhaagen, Michel Versluis, Paul Wesselink, and Luc van der Sluis
Int. Endod. J. **47**, 147–154 (2014).
103. Sonochemical and high-speed optical characterization of cavitation generated by an ultrasonically oscillating dental file in root canal models.
R.G. Macedo, B. Verhaagen, D. Fernandez Rivas, J.G.E. Gardeniers, L.W.M. van der Sluis, P.R. Wesselink, and M. Versluis.
Ultrason. Sonochem. **21**, 324–335 (2014).

2013

102. Measurement and visualization of file-to-wall contact during ultrasonically activated irrigation in simulated canals.
Christos Boutsoukis, Bram Verhaagen, Damien Walmsley, Michel Versluis, and Luc van der Sluis.
Int. Endod. J. **46**, 1046–1055 (2013).
101. Radiographic Healing after a Root Canal Treatment Performed in Single-Rooted Teeth with and without Ultrasonic Activation of the Irrigant: A Randomized Controlled Trial.
Yu-Hong Liang, Lei-Meng Jiang, Lan Jiang, Xiao-Bo Chen, Ying- Yi Liu, Fu-Cong Tian, Xu-Dong Bao, Xue-Jun Gao, Michel Versluis, Min-Kai Wu, and Luc van der Sluis.
J. Endodont. **39**, 1218-1225 (2013).
100. Ultrafast dynamics of the acoustic vaporization of phase-change microdroplets
O. Shpak, T. Kokhuis, Y. Luan, D. Lohse, N. de Jong, J.B. Fowlkes, M.L. Fabiilli, and M. Versluis.
J. Acoust. Soc. Am. **134**, 1610–1621 (2013).
99. Ultra-fast bright field and fluorescence imaging of the dynamics of micron-sized objects.
Xucai Chen, Jianjun Wang, Michel Versluis, Nico de Jong, and Flordeliza S. Villanueva.
Rev. Sci. Instrum. **84**, 063701 (2013).
98. The efficiency and stability of bubble formation by acoustic vaporization of submicron perfluorocarbon droplets.
Nikita Reznik, Oleksandr Shpak, Erik Gelderblom, Ross Williams, Nico de Jong, Michel Versluis, and Peter N. Burns.
Ultrasonics **53**, 1368–1376 (2013).
97. The role of gas in ultrasonically driven vapor bubble growth.
Oleksandr Shpak, Laura Stricker, Michel Versluis, and Detlef Lohse.
Phys. Med. Biol. **58**, 2523–2535 (2013).
96. High-speed imaging in fluids (review).
Michel Versluis.
Exp. Fluids **54**, 1458:1–35 (2013).
95. Secondary Bjerknes forces deform targeted microbubbles.
Tom J.A. Kokhuis, Valeria Garbin, Klazina Kooiman, Benno A. Naaijken, Lynda J.M. Juffermans, Otto Kamp, Antonius F.W. van der Steen, Michel Versluis, and Nico de Jong.
Ultrasound Med. Biol. **39**, 490–506 (2013).
94. 20 years of ultrasound contrast agent modeling.
Telli Faez, Marcia Emmer, Klazina Kooiman, Michel Versluis, Antonius F.W. van der Steen, and Nico de Jong.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **60**, 6–20 (2013).

2012

93. Nonlinear oscillation characteristics of deflating bubbles - a pilot study.
Jacopo Viti, Riccardo Mori, Francesco Guidi, Michel Versluis, Nico de Jong, and Piero Tortoli.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **59**, 2818–2824 (2012).
92. Acoustical properties of individual liposome-loaded microbubbles.
Ying Luan, Telli Faez, Erik Gelderblom, Ilya Skachkov, Bart Geers, Ine Lentacker, Ton van der Steen, Michel Versluis, and Nico de Jong.
Ultrasound Med. Biol. **38**, 2174–2185 (2012).
91. Oscillation characteristics of endodontic files: numerical model and its validation.
B. Verhaagen, S.C. Lea, G.J. de Bruin, L.W.M. van der Sluis, A.D. Walmsley, and M. Versluis.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **59**, 2448–2459 (2012).
90. Role of the confinement of a root canal on jet impingement during endodontic irrigation.
B. Verhaagen, C. Boutsoukis, G.L. Heijnen, L.W.M. van der Sluis, and M. Versluis.
Exp. Fluids **53**, 1841–1853 (2012).
89. Brandaris 128 ultra-high-speed imaging facility: 10 years of operation, updates and enhanced features.
Erik Gelderblom, Hendrik J. Vos, Frits Mastik, Telli Faez, Tom Kokhuis, Antonius F. W. van der Steen, Nico de Jong, Detlef Lohse, and Michel Versluis.
Rev. Sci. Instrum. **83**, 103706 (2012).
88. In vivo characterization of ultrasound contrast agents: microbubble spectroscopy in a chicken embryo.
Telli Faez, Ilya Skachkov, Michel Versluis, Klazina Kooiman, and Nico de Jong.
Ultrasound Med. Biol. **38**, 1608–1617 (2012).
87. Localized removal of layers of metal, polymer or biomaterial by cavitating microbubbles.
D. Fernandez-Rivas, B. Verhaagen, J.R.T. Seddon, A.G. Zijlstra, L.M. Jiang, L.W.M. van der Sluis, M. Versluis, D. Lohse, and H.J.G.E. Gardeniers.
Biomicrofluidics **6**, 034114 (2012).
86. Irrigant Flow beyond the Insertion Depth of an Ultrasonically Oscillating File in Straight and Curved Root Canals: Visualization and Cleaning Efficacy
Maher Malki, Bram Verhaagen, Lei-Meng Jiang, Walid Nehme, Alfred Naaman, Michel Versluis, Paul R. Wesselink, and Lucas van der Sluis.
J. Endodont. **38**, 657-661 (2012).

2011

85. Combined optical and acoustical detection of single microbubble dynamics.
Jeroen Sijl, Hendrik J. Vos, Timo Rozendal, Nico de Jong, Detlef Lohse, and Michel Versluis.
J. Acoust. Soc. Am. **130**, 3271-3281 (2011).
84. iLIF: illumination by laser-induced fluorescence for single flash imaging on a nanoseconds timescale.
Arjan van der Bos, Aaldert Zijlstra, Erik Gelderblom, and Michel Versluis.
Exp. Fluids **51**, 1283-1289 (2011).
83. Microbubble formation and pinch-off scaling exponent in flow-focusing devices.
Wim van Hoeve, Benjamin Dollet, Michel Versluis, and Detlef Lohse.
Phys. Fluids **23**, 092001 (2011).
82. Probing the strength of adhesion of targeted ultrasound contrast agent microbubbles by acoustic forces.
Valeria Garbin, Marlies Overvelde, Benjamin Dollet, Nico de Jong, Detlef Lohse, and Michel Versluis.
Phys. Med. Biol. **56**, 6161–6177 (2011).
81. Dynamics of coated microbubbles adherent to a wall.
Marlies Overvelde, Valeria Garbin, Benjamin Dollet, Nico de Jong, Detlef Lohse, and Michel Versluis.
Ultrasound Med. Biol. **37**, 1500 (2011).
80. Infrared imaging and acoustic sizing of a bubble inside a MEMS piezo ink channel.
Arjan van der Bos, Tim Segers, Roger Jeurissen, Marc van den Berg, Hans Reinten, Herman Wijshoff, Michel Versluis, and Detlef Lohse.
J. Appl. Phys. **110**, 034503 (2011).

79. Bubble size prediction in coflowing streams.
W. van Hoeve, B. Dollet, J.M. Gordillo, M. Versluis, and D. Lohse.
Europhys. Lett. **94**, 64001 (2011).
78. Biodegradable polymeric microcapsules for sequential ultrasound-triggered drug release.
Dennis Lensen, Erik C. Gelderblom, Dennis M. Vriezema, Philippe Marmottant, Nico Verdonshot, Michel Versluis, Nico de Jong, and Jan C.M. van Hest.
Soft Matter **7**, 5417 (2011).
77. Characterizing the subharmonic response of phospholipid-coated microbubbles for carotid imaging.
Telli Faez, Marcia Emmer, Margreet Doctor, Jeroen Sijl, Michel Versluis, and Nico de Jong.
Ultrasound Med. Biol. **37**, 958 (2011).
76. Nonspherical shape oscillations of coated microbubbles in contact with a wall.
H.J. Vos, B. Dollet, M. Versluis, and N. de Jong.
Ultrasound Med. Biol. **37**, 935 (2011).
75. The Influence of the Ultrasonic Intensity on the Cleaning Efficacy of Passive Ultrasonic Irrigation.
Lei-Meng Jiang, Bram Verhaagen, Michel Versluis, Jelmer Langedijk, Paul Wesselink, and Lucas W.M van der Sluis.
J. Endodont. **37**, 688 (2011).
74. 'Compression-only' behavior: A second order nonlinear response of ultrasound contrast agent microbubbles.
Jeroen Sijl, Marlies Overvelde, Benjamin Dollet, Valeria Garbin, Nico de Jong, Detlef Lohse, and Michel Versluis.
J. Acoust. Soc. Am. **129**, 1729 (2011).

2010

73. Breakup of diminutive Rayleigh jets.
Wim van Hoeve, Stephan Gekle, Jacco H. Snoeijer, Michel Versluis, Michael P. Brenner, and Detlef Lohse.
Phys. Fluids **22**, 122003 (2010).
72. Subharmonic behavior of phospholipid-coated ultrasound contrast agent microbubbles.
Jeroen Sijl, Benjamin Dollet, Marlies Overvelde, Valeria Garbin, Timo Rozendal, Nico de Jong, Detlef Lohse, and Michel Versluis.
J. Acoust. Soc. Am. **128**, 3239 (2010).
71. Nonlinear shell behaviour of phospholipid-coated microbubbles.
Marlies Overvelde, Valeria Garbin, Jeroen Sijl, Benjamin Dollet, Nico de Jong, Detlef Lohse, and Michel Versluis.
Ultrasound Med. Biol. **36**, 2080 (2010).
70. An evaluation of the effect of pulsed ultrasound on the cleaning efficacy of passive ultrasonic irrigation.
Lei-Meng Jiang, Bram Verhaagen, Michel Versluis, Chiara Zangrillo, Doris Cuckovic, and Lucas W.M van der Sluis.
J. Endodont. **36**, 1887 (2010).
69. Collapse of non-axisymmetric cavities.
Oscar R. Enríquez, Ivo R. Peters, Stephan Gekle, Laura E. Schmidt, Michel Versluis, Devaraj van der Meer, and Detlef Lohse.
Phys. Fluids **22**, 091104 (2010).
68. The effect of needle-insertion depth on the irrigant flow in the root canal: evaluation by an unsteady Computational Fluid Dynamics model.
C. Boutsoukis, T. Lambrianidis, B. Verhaagen, M. Versluis, E. Kastrinakis, P.R. Wesselink, L.W.M. van der Sluis.
J. Endodont. **36**, 1664 (2010).
67. Acoustic sizing of an ultrasound contrast agent.
David Maresca, Marcia Emmer, Paul L.M.J. van Neer, Hendrik J. Vos, Michel Versluis, Marie Muller, Nico de Jong, and Antonius F.W. van der Steen.
Ultrasound Med. Biol. **36**, 1713 (2010).

66. The effect of root canal taper on the irrigant flow: evaluation using an unsteady Computational Fluid Dynamics model.
C. Boutsoukis, C. Gogos, B. Verhaagen, M. Versluis, E. Kastrinakis, L.W.M. van der Sluis.
Int. Endod. J. **43**, 909 (2010).
65. The effect of apical preparation size on irrigant flow in root canals evaluated using an unsteady Computational Fluid Dynamics model.
C. Boutsoukis, C. Gogos, B. Verhaagen, M. Versluis, E. Kastrinakis, and L.W.M. van der Sluis.
Int. Endod. J. **43**, 874 (2010).
64. Microbubble shape oscillations excited through ultrasonic parametric driving.
Michel Versluis, David E. Goertz, Peggy Palanchon, Ivo Heitman, Sander M. van der Meer, Benjamin Dollet, Nico de Jong, and Detlef Lohse.
Phys. Rev. E **82**, 026321 (2010).
63. The influence of the oscillation direction of an ultrasonic file on the cleaning efficacy of passive ultrasonic irrigation.
Lei-Meng Jiang, Bram Verhaagen, Michel Versluis, and Lucas W.M van der Sluis.
J. Endodont. **36**, 1372 (2010).
62. Evaluation of irrigant flow in the root canal using different needle types by an unsteady Computational Fluid Dynamics model.
C. Boutsoukis, B. Verhaagen, M. Versluis, E. Kastrinakis, and L.W.M. van der Sluis.
J. Endodont. **36**, 875 (2010).
61. Irrigant flow in the root canal: experimental validation of an unsteady Computational Fluid Dynamics model using high-speed imaging.
C. Boutsoukis, B. Verhaagen, M. Versluis, E. Kastrinakis, and L.W.M. van der Sluis.
Int. Endod. J. **43**, 393 (2010).
60. Ultrasound contrast agent microbubble dynamics.
Marlies Overvelde, Hendrik J. Vos, Nico de Jong, and Michel Versluis.
Ultrasound contrast agents: targeting and processing methods for theranostics.
Gaio Paradossi, Paolo Pellegretti, and Andrea Trucco (Eds.)
Springer Books in Biomedical Engineering 2010, XX, 200 p., Softcover
ISBN: 978-88-470-1493-0 (2010).
59. An evaluation of a sonic device designed to activate irrigant in the root canal.
Lei-Meng Jiang, Bram Verhaagen, Michel Versluis, and Luc van der Sluis.
J. Endodont. **36**, 143 (2010).

2009

58. Acoustic measurement of bubble size in an inkjet printhead.
Roger Jeurissen, Arjan van der Bos, Hans Reinten, Marc van den Berg, Herman Wijshoff, Jos de Jong, Michel Versluis, and Detlef Lohse.
J. Acoust. Soc. Am. **126**, 2184 (2009).
57. Laser-activated irrigation of the root canal: cleaning efficacy and flow visualization.
S.D. de Groot, B. Verhaagen, L.W.M. van der Sluis, M.K. Wu, P. Wesselink, and M. Versluis.
Int. Endod. J. **42**, 1077 (2009).
56. Radial modulation of single microbubbles.
Marcia Emmer, Hendrik J. Vos, Michel Versluis, and Nico de Jong.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **56**, 2370 (2009).
55. History force on coated microbubbles propelled by ultrasound.
Valeria Garbin, Benjamin Dollet, Marlies Overvelde, Dan Cojoc, Enzo Di Fabrizio, Leen van Wijngaarden, Andrea Prosperetti, Nico de Jong, Detlef Lohse, and Michel Versluis.
Phys. Fluids **21**, 092003 (2009).
54. Ultrasonic characterization of ultrasound contrast agents.
Nico de Jong, Marcia Emmer, Annemieke van Wamel and Michel Versluis.
Med. Biol. Eng. Comput. **47**, 861–873 (2009).

53. Contrast agent response to chirp reversal: Simulations, optical observations and acoustical verification.
A. Novell, S.M. van der Meer, M. Versluis, N. de Jong, and A. Bouakaz.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **56**, 1199 (2009).
52. Mie scattering distinguishes the topological charge of an optical vortex: a homage to Gustav Mie.
Valeria Garbin, Giovanni Volpe, Enrico Ferrari, Michel Versluis, Dan Cojoc, and Dmitri Petrov.
New J. Phys **11**, 013046 (2009).
51. Oil-filled polymer microcapsules for ultrasound-mediated delivery of lipophilic drugs.
Klazina Kooiman, Marcel R. Böhmer, Marcia Emmer, Hendrik J. Vos, Ceciel Chlon, William T. Shi, Christopher S. Hall, Suzanne H.P.M. de Winter, Karin Schroën, Michel Versluis, Nico de Jong, Annemieke van Wamel.
J. Control. Release **133**, 109 (2009).
50. Pressure-dependent attenuation and scattering of phospholipid-coated microbubbles at low acoustic pressures.
Marcia Emmer, Hendrik J. Vos, David E. Goertz, Annemieke van Wamel, Michel Versluis, and Nico de Jong.
Ultrasound Med. Biol. **35**, 102 (2009).

2008

49. Acoustic characterization of single ultrasound contrast agent microbubbles.
Jeroen Sijl, Emmanuel Gaud, Peter Frinking, Marcel Arditi, Nico de Jong, Detlef Lohse, and Michel Versluis.
J. Acoust. Soc. Am. **124**, 4091 (2008).
48. Nonspherical oscillations of ultrasound contrast agent microbubbles.
Benjamin Dollet, Sander M van der Meer, Valeria Garbin, Nico de Jong, Detlef Lohse, and Michel Versluis.
Ultrasound Med. Biol. **34**, 1465 (2008).
47. The acceleration of solid particles subjected to cavitation nucleation.
Bram Borkent, Manish Arora, Claus-Dieter Ohl, Nico De Jong, Michel Versluis, Detlef Lohse, Knud Aage Mørch, Evert Klaseboer and Boo Cheong Khoo.
J. Fluid Mech. **610**, 157 (2008).
46. The effect of an entrained air bubble on the acoustics of an ink channel.
Roger Jeurissen, Jos de Jong, Hans Reinten, Marc van den Berg, Herman Wijshoff, Michel Versluis, and Detlef Lohse.
J. Acoust. Soc. Am. **123**, 2496 (2008).
45. Non-spherical vibrations of microbubbles in contact with a wall – a pilot study at low mechanical index.
Hendrik J. Vos, Benjamin Dollet, Johannes G. Bosch, Michel Versluis, Nico de Jong
Ultrasound Med. Biol. **34**, 685 (2008).
44. Role of the channel geometry on the bubble pinch-off in flow-focusing devices.
Benjamin Dollet, Wim van Hove, Jan-Paul Raven, Philippe Marmottant, Michel Versluis.
Phys. Rev. Lett. **100**, 034504 (2008).

2007

43. Radial modulation of microbubbles for ultrasound contrast imaging.
A. Bouakaz, M. Versluis, J. Borsboom, and N. de Jong.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **54**, 2283 (2007).
42. Marangoni flow on an inkjet nozzle plate.
J. de Jong, H. Reinten, H. Wijshoff, M. van den Berg, K. Delescen, M.E.H. van Dongen, F. Mugele, M. Versluis, and D. Lohse.
Appl. Phys. Lett. **91**, 204102 (2007).
41. Clinical relevance of pressure-dependent scattering at low acoustic pressures.
Marcia Emmer, Hendrik J. Vos, Annemieke van Wamel, Dave E. Goertz, Michel Versluis, and Nico de Jong.
Ultrasonics **47**, 74 (2007).

40. Leaping shampoo.
Michel Versluis, Cor Blom, Devaraj van der Meer, Ko van der Weele, and Detlef Lohse.
Phys. Fluids **19**, 091106 (2007).
39. Passive ultrasonic irrigation of the root canal: a review of the literature.
L.W.M. van der Sluis, M. Versluis, M.K. Wu, and P.R. Wesselink.
Int. Endod. J. **40**, 415 (2007).
38. 'Compression-only' behavior of phospholipid-coated contrast bubbles.
N. de Jong, C.T. Chin, A. Bouakaz, F. Mastik, D. Lohse, and M. Versluis.
Ultrasound Med. Biol. **33**, 653 (2007).
37. Changes in microbubble dynamics near a boundary revealed by combined optical micromanipulation and high speed imaging.
V. Garbin, D. Cojoc, E. Ferrari, E. di Fabrizio, M.L.J. Overvelde, S.M. van der Meer, N. de Jong, D. Lohse, and M. Versluis.
Appl. Phys. Lett. **90**, 114103 (2007).
36. Microbubble spectroscopy of ultrasound contrast agents.
S.M. van der Meer, B. Dollet, M. Voormolen, C.T. Chin, A. Bouakaz, N. de Jong, M. Versluis, and D. Lohse.
J. Acoust. Soc. Am. **121**, pp. 648-656 (2007).

2006

35. Entrapped air bubbles in piezo-driven inkjet printing: their effect on the droplet velocity.
J. de Jong, R.M. Jeurissen, H. Borel, M. van den Berg, M. Versluis, H. Wijshoff, A. Prosperetti, H. Reinten, and D. Lohse.
Phys. Fluids **18**, 121511 (2006).
34. Sonoporation from jetting cavitation bubbles.
C.D. Ohl, M. Arora, R. Iking, N. de Jong, M. Versluis, M. Delius, and D. Lohse.
Biophys. J. **91**: 4285-4295 (2006).
33. Air entrapment in piezo-driven inkjet printheads
J. de Jong, H. Reinten, M. van den Berg, H. Wijshoff, G.J. de Bruin, M. Versluis, and D. Lohse
J. Acoust. Soc. Am. **120**, 1257–1265 (2006).
32. High-speed imaging of an ultrasound-driven bubble in contact with a wall: "Narcissus" effect and resolved acoustic streaming.
P. Marmottant, M. Versluis, N. de Jong, S. Hilgenfeldt, and D. Lohse.
Exp. Fluids **41**, 147–153 (2006).
31. Leaping shampoo and the stable Kaye effect.
M. Versluis, C. Blom, D. van der Meer, K. van der Weele, and D. Lohse.
J. Stat. Mech. P07007 (2006).
see also Nature News:
Puzzle of leaping liquid solved
doi:10.1038/news060403-10
30. Vibrating Microbubbles Poking Individual Cells: Drug transfer into cells via sonoporation.
A. van Wamel, K. Kooiman, M. Hartevelde, M. Emmer, F.J. ten Cate, M. Versluis and N. de Jong.
J. Control. Release **112**, 149–155 (2006).

2005

29. A model for large amplitude oscillations of coated bubbles accounting for buckling and rupture.
P. Marmottant, S.M. van der Meer, M. Emmer, M. Versluis, N. de Jong, S. Hilgenfeldt, and D. Lohse.
J. Acoust. Soc. Am. **118**, 3499–3505 (2005).
28. Ultrasound-induced gas release from contrast agent microbubbles.
M. Postema, A. Bouakaz, M. Versluis, and N. de Jong.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **52**, 1035–1041 (2005).
27. High-speed optical observations of contrast agent destruction.
A. Bouakaz, M. Versluis, and N. de Jong.
Ultrasound Med. Biol. **31**, 391–399 (2005).

26. Harmonic chirp imaging method for ultrasound contrast agent.
J. Borsboom, C.T. Chin, A. Bouakaz, M. Versluis, and N. de Jong.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **52**, 241–249 (2005).
25. Optical observations of acoustical radiation force effects on individual air bubbles.
P. Palanchon, P. Tortoli, A. Bouakaz, M. Versluis, and N. de Jong.
IEEE Trans. Ultrason. Ferroelectr. Freq. Control **52**, 104–110 (2005).

2004

24. Impact on soft sand: Void collapse and jet formation.
D. Lohse, R. Bergmann, R. Mikkelsen, C. Zeilstra, D. van der Meer, M. Versluis, K. van der Weele, M.A. van der Hoef, and J.A.M. Kuipers.
Phys. Rev. Lett. **93**, 198003 (2004).
23. Micromanipulation of endothelial cells: Ultrasound-microbubble-cell interaction.
A. van Wamel, A. Bouakaz, M. Versluis, and N. de Jong.
Ultrasound Med. Biol. **30**, 1255–1258 (2004).

2003

22. Competitive clustering in a granular Gas.
René Mikkelsen, Ko van der Weele, Devaraj van der Meer, Michel Versluis, and Detlef Lohse.
Phys. Fluids **15** (9), S8 (2003).
21. Faraday, Jets, and Sand.
Marijn Sandtke, Devaraj van der Meer, Michel Versluis, and Detlef Lohse.
Phys. Fluids **15** (9), S7 (2003).
20. Brandaris 128: A digital 25 million frames per second camera with 128 highly sensitive frames.
C.T. Chin, C. Lancée, J. Borsboom, F. Mastik, M. Frijlink, N. de Jong, M. Versluis, and D. Lohse.
Rev. Sci. Instrum. **74**, 5026–5034 (2003).

2002

19. Granular eruptions: Void collapse and jet formation.
René Mikkelsen, Michel Versluis, Elmer Koene, Gert-Wim Bruggert, Devaraj van der Meer, Ko van der Weele, and Detlef Lohse.
Phys. Fluids **14** (9), S14 (2002).

2001

18. Snapping shrimp make flashing bubbles.
D. Lohse, B. Schmitz, and M. Versluis.
Nature **413**, 477–478 (2001).
17. Spiraling bubbles: how acoustic and hydrodynamic forces compete.
J. Rensen, D. Bosman, J. Magnaudet, C.D. Ohl, A. Prosperetti, R. Tögel, M. Versluis, and D. Lohse.
Phys. Rev. Lett. **86**, 4819–4822 (2001).
16. On the Sound of Snapping Shrimp.
Michel Versluis, Anna von der Heydt, Detlef Lohse, and Barbara Schmitz.
Phys. Fluid **13** (9), S13 (2001).
15. Hysteretic clustering in granular gas.
K. van der Weele, D. van der Meer, M. Versluis, and D. Lohse.
Europhys. Lett. **53**, 328–334 (2001).

2000

14. How snapping shrimp snap: through cavitating bubbles.
M. Versluis, B. Schmitz, A. von der Heydt, and D. Lohse.
Science **289**, 2114–2117 (2000).
see also *Science News of the Week*:
For certain shrimp, life's a snap.
Science **289**, 2020–2021 (2000).

Postdoc 1997-2001

13. The heat flux method for producing burner stabilized adiabatic flames: an evaluation with CARS thermometry.
K.J. Bosschaart, M. Versluis, R. Knikker, T.H. van der Meer, K.R.A.M. Schreel, L.P.H. de Goey, and A.A. van Steenhoven.
Combust. Sci. Technol. **169**, 69–87 (2001).
12. Raman-Rayleigh-LIF measurements of temperature and species concentrations in the Delft piloted turbulent jet diffusion flame.
P.A. Nooren, M. Versluis, T.H. van der Meer, R.S. Barlow, and J.H. Frank.
Appl. Phys. B - Lasers O. **71**, 95–111 (2000).
11. Planar laser-induced fluorescence of H₂O to study the influence of residual gases on cycle-to-cycle variations in SI engines.
G. Juhlin, H. Neij, M. Versluis, B. Johansson, and M. Aldén.
Combust. Sci. Technol. **132**, 75–97 (1998).
10. Two-dimensional two-phase water detection using a tunable excimer laser.
M. Versluis, G. Juhlin, Ö. Andersson, and M. Aldén.
Appl. Spectrosc. **52**, 343–347 (1998).
9. 2-D absolute OH concentration profiles in atmospheric flames using planar LIF in a bi-directional laser beam configuration.
M. Versluis, N. Georgiev, L. Martinsson, S. Kröll, and M. Aldén.
Appl. Phys. B - Lasers O. **65**, 411–417 (1997).

PhD thesis work 1991-1994

8. Laser-induced fluorescence detection of OH in a flame near 268 nm.
M. Versluis, K.L. Queeney, J.L. Springfield, T. Dreier, and A. Dreizler.
J. Mol. Spectrosc. **166**, 486–488 (1994).
7. Degenerate 4-wave-mixing with a tunable excimer laser.
M. Versluis, G. Meijer, and D.W. Chandler.
Appl. Optics **33**, 3289–3925 (1994).
6. Laser-induced fluorescence imaging in a 100 KW natural gas flame.
M. Versluis, M. Boogaarts, R. Klein-Douwel, A. Thus, W. de Jongh, A. Braam, J.J. ter Meulen, W. Leo Meerts, and G. Meijer.
Appl. Phys. B - Photo. **55**, 164–170 (1992).
5. Intra-cavity C atom absorption in the tuning range of the ArF excimer Laser.
M. Versluis and G. Meijer.
J. Chem. Phys. **96**, 3350–3351 (1992).
4. Frequency calibration in the ArF excimer laser tuning range using laser-induced fluorescence of NO.
M. Versluis, M. Ebben, M. Drabbels, and J.J. ter Meulen.
Appl. Optics **30**, 5229–5234 (1991).
3. The laser-induced fluorescence spectrum of SiF around 193 nm.
M. Ebben, M. Versluis, and J.J. ter Meulen.
J. Mol. Spectrosc. **149**, 329–340 (1991).

Master thesis work 1989-1990

2. A far infrared laser sideband spectrometer in the frequency region 550-2700 GHz.
P. Verhoeve, E. Zwart, M. Versluis, J.J. ter Meulen, W.L. Meerts, A. Dymanus, and D.B. McLay.
Rev. Sci. Instrum. **61**, 1612–1625 (1990).
1. Far infrared laser sideband spectroscopy of H_3O^+ - The pure inversion spectrum around 55 cm^{-1} .
P. Verhoeve, M. Versluis, J.J. ter Meulen, W. Leo Meerts, and A. Dymanus.
Chemical Physics Letters **161**, 195–201 (1989).