

**List of Publications: Books published– 5; Chapters in books - 12;  
Papers in professional journals -347; Submitted papers-3; Papers  
in proceedings of professional conferences – 60, Miscellaneous  
publications - 7**

### **Books**

1. A.L. Yarin, *Free Liquid Jets and Films: Hydrodynamics and Rheology*. Longman Scientific & Technical and Wiley & Sons, Harlow, New York, 1993, 446 pp.
2. A.L. Yarin, *Electrospinning of Nanofibers from Polymer Solutions and Melts*. Lecture Notes 5. Centre of Excellence for Advanced Materials and Structures, Warsaw, 2003, 110 pp.
3. A.L. Yarin, B. Pourdeyhimi, S. Ramakrishna. *Fundamentals and Applications of Micro- and Nanofibers*. Cambridge University Press, Cambridge, 2014.
4. A.L. Yarin, I.V. Roisman, C. Tropea. *Collision Phenomena in Liquids and Solids*. Cambridge University Press, Cambridge, 2017.
5. A. L. Yarin, M. W. Lee, S. An, and S. S. Yoon, *Self-Healing Nanotextured Vascular Engineering Materials*. Springer Nature, Switzerland AG, 2019.

### **Chapters in books**

1. V.M. Entov and A.L. Yarin, "Dynamics of Free Liquid Jets and Films of Viscous and Rheologically Complex Liquids". *Advances in Mechanics, VINITI, Mekhanika Zhidkosti i Gaza (Fluid Dynamics)*, 18, 112-197 (1984) (in Russian).
2. A.L. Yarin, "Self-similarity". *Springer Handbook of Experimental Fluid Mechanics*, pp. 57-82 (2007).
3. A.L. Yarin, "Drop Impact Dynamics: Splashing, Spreading, Receding, Bouncing...". *Annual Review of Fluid Mechanics* v.38, 159-192 (2006).
4. D.H. Reneker, A.L. Yarin, E. Zussman and H. Xu, "Electrospinning of Nanofibers from Polymer Solutions and Melts" *Advances in Applied Mechanics* v. 41, 43-195 (2007).
5. D.H. Reneker, A.L. Yarin, E. Zussman, S. Koombhongse and W. Kataphinan, "Nanofiber Manufacturing: Toward Better Process Control" *American Chemical Society Series 918, Chapter 2* (Eds. D.H. Reneker and H. Fong),7-20, 2006.
- 6.....C.J. Thompson, G.G. Case, A.L. Yarin and D.H. Reneker, "Effects of Parameters on Nanofiber Diameter Determined from Electrospinning Model", *Nanotechnology Research: New Nanostructures*. (Xiaohua Huang, Ed.). Chapter 6, pp. 223-242, Nova Science Publishers Inc., 2007.
7. J.K. Wise, M. Cho, E. Zussman, C.M. Megaridis and A.L. Yarin, "Electrospinning

- techniques to control deposition and structural alignment of nanofibrous scaffolds for cellular orientation and cytoskeletal reorganization", *Nanotechnology and Tissue Engineering*, pp. 243-260. (Editors: C.T. Laurencin and L.S. Nair)CRC Press, Taylor and Francis (2008).
8. J.K. Wise, E. Zussman, A.L. Yarin, C.M. Megaridis, M. Cho. "Electrospinning techniques to control deposition and structural alignment of nanofibrous scaffolds for cellular orientation and cytoskeletal reorganization", *Nanotechnology and Tissue Engineering*, 2<sup>nd</sup> Edition (Editors: C.T. Laurencin and L.S. Nair), pp. 285- 303, CRC Press, Taylor and Francis (2014).
  9. N. Ashgriz, A.L. Yarin. Chapter 1. Capillary instability of free liquid jets. Springer Handbook of Atomization and Sprays, pp. 3-53, Springer, Heidelberg (2011).
  10. A.L. Yarin. Chapter 2. Bending and buckling instabilities of free liquid jets: experiments and general quasi-one-dimensional model. Springer Handbook of Atomization and Sprays, pp. 55-73, Springer, Heidelberg (2011).
  11. S. Sinha-Ray, Y. Zhang, A.L. Yarin, S.C. Davis, B. Pourdeyhimi. Solution blowing of soy protein fibers. Chapter 20 in *Biobased Monomers, Polymers, and Materials* (Editors: Smith, P.B., Gross R.A.). pp. 335-348. American Chemical Society Symposium Series 1105, Washington, 2012 (distributed by Oxford University Press).
  12. J.K. Wise, M. Cho, E. Zussman, C.M. Megaridis and A.L. Yarin, "Electrospinning techniques to control deposition and structural alignment of nanofibrous scaffolds for cellular orientation and cytoskeletal reorganization", *Nanotechnology and Regenerative Engineering*, pp. 285-303. (Editors: C.T. Laurencin and L.S. Nair)CRC Press, Taylor and Francis (2015).

#### **Papers in professional journals published in English.**

1. V.M. Entov and A.L. Yarin, "The dynamics of thin liquid jets in air", *J. Fluid Mech.* 140, 91-111 (1984).
2. V.B. Librovich and A.L. Yarin, "Problems of the mechanical strength in the combustion theory", *Archivum Combustionis*, 8, No. 2, 79 - 99 (1988).
3. A. Yarin, Vl. Rusinov, P. Gospodinov and St. Radev, "Quasi one-dimensional model of drawing of glass microcapillaries and approximate solutions", *Theoretical and Applied Mechanics*, 20, No. 3, 55-62 (1989).
4. A.L. Yarin, "Strong flows of polymeric liquids: 1. Rheological behavior", *J. Non -Newtonian Fluid Mechanics*, 37, No. 2 + 3, 113 - 138 (1990).

5. A.L. Yarin, "Strong flows of polymeric liquids: 2. Mechanical degradation of macromolecules", *J. Non-Newtonian Fluid Mechanics*, 38, No. 2 + 3, 127-136 (1991).
6. J. Doupovec and A.L. Yarin, "Nonsymmetrical modified chemical vapor deposition (N-MCVD) process", *J. Lightwave Technology*, 9, No. 6, 695-700 (1991).
7. A. Yarin, "The collective effect in disperse systems - an approach based on the renormalization group technique", *Theoretical and Applied Mechanics*, 22, No. 2, 55-60 (1991).
8. St. Radev, P. Gospodinov, V.I. Roussinov and A.L. Yarin, "Determination of the activation energy during drawing of optical fibers", *Theoret. and Appl. Mechanics*, v. 23, No. 2, 79-84 (1992).
9. V. Bernat and A.L. Yarin, "Analytical solution for stresses and material birefringence in optical fibers with noncircular cladding", *J. Lightwave Technology*, 10, No. 4, 413-417 (1992).
10. A.L. Yarin and T.L. Nudlina, "Thermophoretic deposition of fine particles from longitudinal flow over a cylinder", *J. Aerosol Sci.*, 23, No. 2, 87-95 (1992).
11. E. Miller, A.L. Yarin and Y. Goldman, "Competition between thermophoretic deposition and erosion leading to appearance of steady coating", *J. Aerosol Sci.*, 23, No. 2, 97 - 113 (1992).
12. A.L. Yarin, "Flow-induced on-line crystallization of rodlike molecules in fibre spinning", *J. Applied Polymer Sci.* 46, No. 5, 873-878 (1992).
13. A.L. Yarin, A. Oron and Ph. Rosenau, "Capillary instability of thin liquid film on a cylinder", *Phys. Fluids A*, 5, No. 1, 91-98 (1993).
14. A.L. Yarin, V. Bernat, J. Doupovec and P. Miklos, "The viscous collapse of radial nonsymmetric composite tubes", *J. Lightwave Technology*, 11, No. 2, 198-204 (1993).
15. B. Tchavdarov, A.L. Yarin and S. Radev, "Buckling of thin liquid jets". *J. Fluid Mech.*, v. 253, 593-615 (1993).
16. M.B. Rubin and A.L. Yarin, "On the relationship between phenomenological models for elastic-viscoplastic metals and polymeric liquids". *J. Non-Newton. Fluid Mech.*, v. 50, No. 1, 79-88 (1993); Corrigendum: *J. Non-Newton. Fluid Mech.*, v.57, n2/3, 321 (1995).
17. A.L. Yarin, "Instability of rapidly evaporating liquid jets and droplets". Max-Planck-Institut für Strömungsforschung, Bericht, 7/1993, Göttingen (1993).
18. A.L. Yarin, P. Gospodinov and V.I. Roussinov, "Stability loss and sensitivity in hollow fiber drawing". *Phys. Fluids*, v. 6, No. 4, 1454-1463 (1994).
19. A.L. Yarin, "On instability of rapidly stretching metal jet produced by shaped charges", *Int. J. Engineering Sci.*, v. 32, No. 5, 847-862 (1994).

20. A.L. Yarin, A. Arkadyev and P. Bar-Yoseph, "Coating growth on turbine blade in polydisperse particle - hot gas flow". *Int. J. Turbo & Jet Engines*, 11, No. 2 + 3, 243-247 (1994).
21. E. Moses, P. Bar-Yoseph and A. Yarin, "On finite element solutions of boundary layer equations", *Computational Fluid Dynam. J.*, v. 3, No. 2, 139-160 (1994).
22. A.L. Yarin and D.A. Weiss, "Impact of drops on solid surfaces: self-similar capillary waves, and splashing as a new type of kinematic discontinuity", *J. Fluid Mech.*, v. 283, 141-173 (1995).
23. A.L. Yarin, "Surface-tension-driven low Reynolds number flows arising in optoelectronic technology", *J. Fluid Mech.*, v. 286, 173-200 (1995).
24. E. Moses, A.L. Yarin and P. Bar-Yoseph, "On knocking prediction in spark ignition engines". *Combustion & Flame*, v. 101, No. 3, 239-261 (1995).
25. P. Bar-Yoseph, E. Moses, U. Zrahia and A.L. Yarin, "Space-time spectral elements method for one-dimensional diffusion-convection problems", *J. Comput. Phys.*, v.119, 62-74 (1995).
26. A.L. Yarin, M.B. Rubin and I.V. Roisman, "Penetration of a rigid projectile into an elastic-plastic target of finite thickness", *Int. J. Impact Eng.*, v. 16, No. 5/6, 801-831 (1995).
27. A.L. Yarin and B. Tchavdarov, "Onset of folding in plane liquid films", *J. Fluid Mech.*, v. 307, 85-99 (1996).
28. A.L. Yarin, T.A. Kowalewski, W.J. Hiller and St. Koch, "Distribution of particles suspended in 3-D laminar convection flow", *Phys. Fluids*, v. 8, No. 5, 1130 - 1140 (1996).
29. I.V. Roisman and A.L. Yarin, "Oblique penetration of rigid projectile into an elastic-plastic target", *ZAMM*, v. 76, supplement 5, 429-430 (1996).
30. A.L. Yarin, "Some problems of low Reynolds number hydrodynamics and theory of elasticity arising in optoelectronic technology", *ZAMM*, v. 76, supplement 5, 559 - 560 (1996).
31. A.L. Yarin, "On the mechanism of turbulent drag reduction in dilute polymer solutions: dynamics of vortex filaments", *J. Non-Newton Fluid Mech.*, v. 69, N2 - 3, 137 - 153 (1997).
32. A.L. Yarin, O. Gottlieb and I.V. Roisman, "Chaotic rotation of small particles shaped as triaxial ellipsoids in simple shear flow", *J. Fluid Mech.*, v. 340, 83 - 100 (1997).
33. P. Gospodinov and A.L. Yarin, "Draw resonance of optical micro-capillaries in non-isothermal drawing". *Int. J. Multiphase Flow*, v. 23, N5, 967-976 (1997).
34. I.V. Roisman, A.L. Yarin and M.B. Rubin, "Oblique penetration of a rigid projectile into an elastic-plastic target", *Int. J. Impact Eng.*, v. 19, N 9/10, 769 - 795 (1997).

35. A.L. Yarin, G. Brenn, J. Keller, M. Pfaffenlehner, E. Ryssel and C. Tropea, "Flow field characteristics of an aerodynamic acoustic levitator", *Phys. Fluids*, v. 9, N 11, 3300 - 3314 (1997).
36. A.Yu. Gelfgat, P.Z. Bar-Yoseph and A.L. Yarin, "On oscillatory instability of convective flows at low Prandtl number", *J. Fluids Eng.*, v. 119, N 4, 823 - 830 (1997).
37. G. Brenn, D. Rensink, C. Tropea, A.L. Yarin. [Investigation of droplet drying characteristics using an acoustic-aerodynamic levitator](#). *International Journal of Fluid Mechanics Research* v. 24 (4-6), 633-642 (1997).
38. A.L. Yarin, M. Pfaffenlehner and C. Tropea, "On the acoustic levitation of droplets", *J. Fluid Mech.*, v. 356, 65 - 91 (1998).
39. A.L. Yarin and M.D. Graham, "A model for slip at polymer/solid interfaces". *J. Rheology*, v. 42, N6, 1491-1504 (1998).
40. D.A. Weiss and A.L. Yarin, "Drop impact onto thin liquid layers: A new mechanism of bubble entrainment", *ZAMM*, v. 78, S2, Section 1 - 13 (H - Z) S803 - S804 (1998).
41. A.Yu. Gelfgat, P.Z. Bar-Yoseph and A.L. Yarin, "Non-symmetric convective flows in laterally heated rectangular cavities". *Int. J. Comput. Fluid Dyn.* v.11, N 3-4, 261-273 (1999).
42. D.A. Weiss and A.L. Yarin, "Single drop impact onto liquid films: Neck distortion, jetting, tiny bubbles entrainment, and crown formation", *J. Fluid Mech.*, v. 385, 229-254 (1999).
43. A. Yu. Gelfgat, P.Z. Bar-Yoseph and A.L. Yarin, "Stability of multiple steady states of convection in laterally heated cavities". *J. Fluid Mech.* v. 388, 315 - 334 (1999).
44. I.V. Roisman, K. Weber, A.L. Yarin, V. Hohler and M.B. Rubin, "Oblique penetration of a rigid projectile into a thick elastic-plastic target: theory and experiment", *Int. J. Impact Eng.*, v. 22, N7, 707-726 (1999).
45. A.L. Yarin, G. Brenn, O. Kastner, D. Rensink and C. Tropea, "Evaporation of acoustically levitated droplets", *J. Fluid Mech.* v. 399, 151-204 (1999).
46. M. Stelter, J. Wunderlich, S.K. Rath, G. Brenn, A.L. Yarin, R.P. Singh and F. Durst, "Shear and extensional investigations in solutions of grafted/ungrafted amylopectin and polyacrylamide", *J. Appl. Polym. Sci.*, v. 74, N11, 2773-2782 (1999).
47. A.L. Yarin, P. Gospodinov, O. Gottlieb, and M.D. Graham. "Newtonian fiber spinning: chaotic variation of the cross-sectional radius of the as-spun fibers". *Phys. Fluids*, v. 11, N11, 3201-3208 (1999).

48. J. Priede, A. Cramer, A. Yu. Gelfgat, P.Z. Bar-Yoseph, A.L. Yarin and G. Gerbeth, "Experimental and numerical study of anomalous thermocapillary convection in liquid gallium". *Phys. Fluids*, v.11, N11, 3331-3339 (1999).
49. A.L. Yarin, D. Lastochkin, Y. Talmon and Z. Tadmor, "Bubble nucleation during devolatilization of polymer melts", *AIChE Journal*, v. 45, N12, 2590-2605 (1999).
50. A.L. Yarin, I.V. Roisman, K. Weber and V. Hohler, "Model for ballistic fragmentation and behind-armor debris". *Int. J. Impact Eng.*, v. 24, N2, 171-201 (2000).
51. N. Kawahara, A.L. Yarin, G. Brenn, O. Kastner and F. Durst, "Effect of acoustic streaming on the mass transfer from a sphere". *Phys. Fluids*, v. 12, N4, 912-923, (2000).
52. T. Wunderlich, M. Stelter, T. Tripathy, B.R. Nayak, G. Brenn, A.L. Yarin, R.P. Singh, P.O. Brunn and F. Durst, "Shear and extensional rheological investigations in solutions of grafted and ungrafted polysaccharides", *J. Appl. Polym. Sci.*, v. 77, N14, 3200-3209 (2000).
53. M. Stelter, G. Brenn, A.L. Yarin, R.P. Singh and F. Durst, "Validation and application of a novel elongational device for polymer solutions", *J. Rheol.*, v. 44, N3, 595-616 (2000),
54. D.H. Reneker, A.L. Yarin, H. Fong and S. Koombhongse, "Bending instability of electrically charged liquid jets of polymer solutions in electrospinning", *J. Appl. Phys.* v. 87, No. 9, 4531-4547 (2000).
55. G. Yossifon, M.B. Rubin, and A.L. Yarin, "Penetration of a rigid projectile into a finite thickness elastic-plastic target - Comparison between theory and numerical computations", *Int. J. Impact Eng.* v. 25, N1, 265-290 (2001).
56. A.L. Yarin, S. Koombhongse and D.H. Reneker, "Bending instability in electrospinning of nanofibers". *J. Appl. Phys.* v. 89, N5, 3018-3026 (2001).
57. I.V. Roisman, A.L. Yarin, and M.B. Rubin, "Normal penetration of an eroding projectile into an elastic-plastic target", *Int. J. Impact Eng.* v. 25, N6, 573-597 (2001).
58. A.L. Yarin, "Stationary dc streaming due to shape oscillations of a droplet and its effect on mass transfer in liquid-liquid systems", *J. Fluid Mech.* v. 444, 321-342 (2001).
59. G. Brenn, T. Wiedermann, D. Rensink, O. Kastner, A.L. Yarin, "Modellierung und experimentelle Untersuchung der Morphologie sprühgetrockneter Partikeln. *Chemie-Ingenieur-Technik* v. 73, 491-494 (2001).
60. A. L. Yarin, S. Koombhongse and D. H. Reneker, "Taylor cone and jetting from liquid droplets in electrospinning of nanofibers". *J. Appl. Phys.* v. 90, N9, 4836-4846 (2001).

61. A. Theron, E. Zussman and A. L. Yarin, "Electrostatic field-assisted alignment of electrospun nanofibers". *Nanotechnology* v. 12, N3, 384-390 (2001). This article was chosen in the Editor's Choice in "Science" v. 293, N5537, Issue of 14 September 2001.
62. A. Yu. Gelfgat, A. L. Yarin and P. Bar-Yoseph, "Three-dimensional instability of a two-layer Dean flow", *Phys. Fluids* v. 13, N11, 3185-3195 (2001).
63. G. Brenn, T. Wiedeman, D. Rensink, O. Kastner, and A. L. Yarin, "Modeling and experimental investigation of the morphology of spray dried particles". *Chem – Eng. Technol.* v. 24, N11, 1113–1116 (2001).
64. M. B. Rubin and A. L. Yarin, "A generalized formula for the penetration depth of a deformable projectile", *Int. J. Impact Eng.* v.27, N4, 287-398 (2002). Corrigendum in *Int. J. Impact Eng.* v. 31, 1318-1320 (2005).
65. A.L. Yarin, A.Yu. Gelfgat, and P.Z. Bar-Yoseph, "Enhancement of mass transfer in a two-layer Taylor-Couette apparatus with axial flow", *Int. J. Heat and Mass Transfer* v. 45, N3, 555-570 (2002).
66. S. N. Reznik and A.L. Yarin, "Spreading of a viscous drop due to gravity and capillarity on a horizontal or an inclined dry wall", *Phys. Fluids* v. 14, N1, 118-132 (2002).
67. S. N. Reznik, E. Zussman and A.L. Yarin, "Motion of an inclined plate supported by a sessile two – dimensional drop", *Phys. Fluids* v. 14, N1, 107-117 (2002).
68. G. Yossifon, A.L. Yarin, and M.B. Rubin, "Penetration of a rigid projectile into a multi-layered target: Theory and numerical computations", *Int. J. Eng. Sci.* v.40, N 12, 1381-1401 (2002).
69. M. Stelter, G. Brenn, A.L. Yarin, R.P. Singh, and F. Durst, "Investigation of the elongational behavior of polymer solutions by means of an elongational rheometer", *J. Rheology* v.46, N2, 507-527 (2002).
70. S.N. Reznik and A.L. Yarin, "Strong squeezing flow between parallel plates leads to rolling motion at the contact line", *Int. J. Multiph. Flow*, v.28, N6, 911-925 (2002).
71. A.L. Yarin, G. Brenn and D. Rensink, "Evaporation of acoustically levitated droplets of binary liquid mixtures and aqueous solutions", *J. Heat and Fluid Flow* v.23, N 4,471-486 (2002).
72. A.L. Yarin, D.A. Weiss, G. Brenn and D. Rensink, "Acoustically levitated drops: Drop oscillation and break-up driven by ultrasound modulation", *Int. J. Multiph. Flow*, v.28, N6, 887-910 (2002).
73. G. Yossifon and A.L. Yarin, "Behind the armor debris analysis", *Int. J. Impact Eng.* V.27, N 8, 807-835 (2002).

74. A. L. Yarin, W. Liu and D. H. Reneker, "Motion of droplets along thin fibers with temperature gradient", *J. Appl. Phys.*, v.91, N7, 4751-4760 (2002).
75. E.Zussman, A.L.Yarin and D.Weih, "A micro-aerodynamic decelerator based on permeable surfaces of nanofiber mats", *Experiments in Fluids*, v.33, 315-320 (2002).
76. A.L.Yarin, G.Brenn, O.Kastner and C.Tropea, "Evaporation of acoustically levitated droplets of liquid-solid suspensions", *Phys. Fluids*, v.14, N 7, 2289-2298 (2002).
77. A.L.Yarin, "Stationary streaming and mass transfer due to capillary waves in a two-layer system", *Fluid Dyn. Research* v.31, N2, 79-102 (2002).
78. S.N.Reznik and A.L.Yarin, "Spreading of an axisymmetric viscous drop due to gravity and capillarity on a dry horizontal wall", *Int. J. Multiphase Flow*, v.28, N 9, 1437-1457 (2002).
79. D.H. Reneker, W. Kataphinan, A. Theron, E. Zussman and A.L. Yarin, "Nanofiber garlands of polycaprolactone by electrospinning", *Polymer*, v.43, 6785-6794 (2002).
80. A.Yu. Gelfgat, A.L. Yarin and P.Z. Bar-Yoseph, "Dean vortices-induced enhancement of mass transfer through an interface separating two immiscible liquids", *Phys. Fluids*, v.15, N 2, 330-347 (2003). The article was also chosen for *Virtual Journal of Biological Physics Research* and published there on January 15, 2003.
81. E. Zussman, A. Theron and A.L. Yarin, "Formation of nanofiber crossbars in electrospinning", *Appl. Physics Letters*, v.82, N 6, 973-975 (2003).
82. A.Yu. Gelfgat, A.L. Yarin and P.Z. Bar-Yoseph, "Convection-induced enhancement of mass transfer through an interface separating two immiscible liquids in a two-layer horizontal annulus", *Phys. Fluids*, v.15, N 3, 790-800 (2003).
83. A.Benatar, D.Rittel, and A.L. Yarin. "Theoretical and experimental analysis of longitudinal wave propagation in cylindrical viscoelastic rods." *J.Mech. and Phys. of Solids* v. 51, No. 8, 1413-1431 (2003).
84. E. Zussman, D. Rittel and A.L. Yarin, "Failure modes of electrospun nanofibers", *Applied Physics Letters*, v.82, N 22, 3958-3960 (2003). Several figures from this article were chosen to be the Cover Image of this issue of *Applied Physics Letters*.
85. Y. Dror, W. Salalha, R.L. Khalfin, Y. Cohen, A.L. Yarin and E. Zussman, "Carbon nanotubes embedded in oriented polymer nanofibers by electrospinning", *Langmuir*, v.19, No. 17, 7012-7020 (2003).
86. A. Theron, E. Zussman and A.L. Yarin, "Measurements of the governing parameters in the electrospinning of polymer solutions", *Polymer Preprints* v.44(2), 61-62 (2003).



87. H.Xu, A.L. Yarin and D.H.Reneker, "Characterization of fluid flow in jets during electrospinning" , Polymer Preprints v.44(2) 51-52 (2003).
88. Z. Sun, E. Zussman, A.L. Yarin, J.H. Wendorff and A. Greiner, "Compound core/shell polymer nanofibers by co-electrospinning", Advanced Materials v.15, N22, 1929-1932 (2003).
89. A.L.Yarin, E. Zussman, S.A. Theron, S. Rahimi, Z. Sobe and D. Hasan, "Elongational behavior of gelled propellant simulants", J. Rheol. V.48, N 1,101-116(2004).
90. S.A.Theron, E.Zussman and A.L. Yarin, "Experimental investigation of the governing parameters in the electrospinning of polymer solutions", Polymer v.45,2017-2030 (2004).
91. A.L.Yarin and E.Zussman, "Upward needleless electrospinning of multiple nanofibers", Polymer v.45, N 9, 2977-2980 (2004). This article was chosen and highlighted in "Materials Today", p. 17, June (2004).
92. S.N. Reznik, A.L. Yarin, A.Theron and E.Zussman, "Transient and steady shapes of droplets attached to a surface in strong electric fields", J. Fluid Mech. v. 516, 349-377 (2004).
93. A.Y. Gelfgat, A.L. Yarin, P.Z. Bar-Yoseph, M.D. Graham and G. Bai, "Numerical modeling of two-fluid Taylor-Couette flow with deformable capillary liquid-liquid interface", Phys. Fluids v.16, No. 11, 4066-4074 (2004).
94. W. Salalha, Y. Dror, R.L. Khalfin, Y. Cohen, A.L. Yarin and E. Zussman, "Single-walled carbon nanotubes embedded in oriented polymeric nanofibers by electrospinning", Langmuir v. 20, No.22, 9852-9855 (2004).
95. A.B. Wang, Y.S. Chen, Y.J. Wu, J.Y. Sung and A.L. Yarin, "Withdrawal of a conical pin from a pool of liquid", Journal of Mechanics , v.20, No. 3, 219-232 (2004) .
96. A.L. Yarin, A.G. Yazicioglu and C.M. Megaridis, "Thermal stimulation of aqueous volumes contained in carbon nanotubes: Experiment and modeling", Applied Physics Lett. v. 86, 013109 (2005). This article has been selected for the January 17, 2005 issue of Virtual Journal of Nanoscale Science & Technology.
97. S.A. Theron, A.L. Yarin, E. Zussman and E. Kroll, "Multiple jets in electrospinning: experiment and modeling", Polymer v. 46, 2889-2899 (2005).
98. A.L. Yarin, A.G. Yazicioglu , C.M. Megaridis, M. Pia Rossi and Y. Gogotsi, "Theoretical and experimental investigation of aqueous liquids contained in carbon nanotubes ", J.Appl. Phys v. 97 , 124309 (2005). This article has been selected for the July 4, 2005 issue of Virtual Journal of Nanoscale Science & Technology.

99. A.L. Yarin, W. Kataphinan and D.H. Reneker, "Branching in electrospinning of nanofibers", *J. Appl. Phys.* v. 98, 064501 (2005).
100. Y.Dror, W. Salalha, W. Pyckhout-Hintzen, A.L. Yarin, E. Zussman and Y. Cohen, "From carbon nanotube dispersion to composite nanofibers," *Progr Colloid Polym. Sci.* v. 130, 64-69 (2005).
101. G. Brenn, Z. Prebeg, D. Rensink and A.L. Yarin, "The control of spray formation by vibrational excitation of flat-fan and conical liquid sheets", *Atomization and Sprays* v. 15, 661-685 (2005).
102. A.L. Yarin, G.G. Chase, W. Liu, S.V. Doiphode, and D.H. Reneker, "Liquid drop growth on a fiber ", *AIChE Journal*, v. 52, No. 1, 217-227 (2006).
103. A.L. Yarin, J.B. Szczech, C.M. Megaridis, J. Zhang and D.R. Gamota, "Lines of dense nanoparticle colloidal suspensions evaporating on a flat surface: Formation of non-uniform deposits", *J. Colloid and Interface Sci.* v. 294, N 2, 343-354 (2006).
104. G. Brenn, M. Stelter, A.L. Yarin, F. Durst, "Capillary thinning of filaments of polymer solutions with surfactants". *Colloids and Surfaces A*, v. 282-283, 68-74 (2006).
105. E. Zussman, A.L. Yarin, A.V. Bazilevsky, R. Avrahami and M. Feldman, "Electrospun Polyacrylonitrile/Poly(methyl methacrylate)-derived carbon micro-/nanotubes", *Advanced Materials*, v. 18, N 3, 348-353 (2006).
106. A. Greiner, J.H. Wendorff, A.L. Yarin, E. Zussman, "Biohybrid nanosystems with polymer nanofibers and nanotubes" *Applied Microbiology and Biotechnology* v. 71, N 4, 387-393 (2006).
107. I. Silverman, A.L. Yarin, S.N. Reznik, A. Arenshtam, D. Kijet, A. Nagler, "High heat-flux accelerator targets: cooling with liquid metal jet impingement", *Int. J. Heat and Mass Transf.* v.49, N 17-19, 2782-2792 (2006).
108. E. Zussman, M. Burman, A.L. Yarin, R. Khalfin and Y. Cohen, "Tensile deformation of electrospun Nylon 6,6 nanofibers", *J. Polym. Sci., Part B- Polymer Physics*, v. 44, 1482-1489 (2006).
109. A.L. Yarin, B. Rovagnati, F. Mashayek and T. Matsoukas, "A reaction model for plasma coating of nanoparticles by amorphous carbon layers", *J. Appl. Phys.* v. 99, N6, Art. No 064310 (2006).
110. E. Katz, A.L. Yarin, W. Salalha and E. Zussman, "Alignment and self-assembly of elongated micron-size rods in several flow fields," *J. Appl. Phys.* 100, 034313 (2006). This article has also been selected for the August 21, 2006 issue of *Virtual Journal of Nanoscale Science & Technology*. At <http://www.vjnano.org>.

111. S.N. Reznik, A.L. Yarin, E.Zussman and L. Bercovici, "Evolution of a compound droplet attached to a core-shell nozzle under the action of a strong electric field," *Phys. Fluids* v. 18, 062101 (2006). It has also been selected for the July 1, 2006 issue of *Virtual Journal of Biological Physics Research*.
112. S. N. Reznik, W.Salalha, A.L. Yarin and E. Zussman, "Microscale fiber alignment by three-dimensional sessile drop on a wettable pad", *J. Fluid Mech.* v. 574, 179-207 (2007).
113. E. Zussman, A.L. Yarin and R.M. Nagler, "Age- and flow dependency of salivary viscoelasticity," *J.of Dental Research* v. 86, N3, 281-285 (2007).
114. A.L. Yarin. Self-propagation of an electrode in leaky dielectrics and its possible relation to bacterial flagellar motors. *Appl. Phys. Lett.* V. 90, N 2 024103 (2007).
115. Y. Dror, W. Salalha, R. Avrahami, E. Zussman, A. L. Yarin, R. Dersch, A. Greiner, J. H. Wendorff. One-step production of polymeric micro-tubes via co-electrospinning. *Small* v. 3, N. 6, 1064-1073 (2007).
116. A.V. Bazilevsky, A.L. Yarin, C.M. Megaridis. Co-electrospinning of core-shell nano/microfibers using a single nozzle technique. *Langmuir* v. 23, N5, 2311-2314 (2007).
117. A.L. Yarin, E. Zussman, J.H. Wendorff, A. Greiner. Material encapsulation in core-shell micro/nanofibers, polymer and carbon nanotubes and micro/nanochannels. *J. Mater. Chem.* V. 17, 2585-2599 (2007).
118. A.V. Bazilevsky, K. Sun, A.L. Yarin, C.M. Megaridis. Selective intercalation of polymers in carbon nanotubes. *Langmuir* v. 23, 7451-7455 (2007).
119. T. Han, D.H. Reneker, A.L. Yarin. Buckling of jets in electrospinning. *Polymer* v. 48, 6064-6076 (2007).
120. C.J. Thompson, G.G. Chase, A.L. Yarin, D.H. Reneker. Effect of parameters on nanofiber diameter determined from electrospinning model. *Polymer* v. 48, 6913-6922, (2007).
121. A.V. Bazilevsky, A.L. Yarin, C.M. Megaridis. Pressure-driven delivery through carbon tube bundles. *Lab. Chip* v.8, 152-160 (2008).
122. R. Srikar, A.L. Yarin, C.M. Megaridis, A.V. Bazilevsky, E. Kelley. Desorption-limited mechanism of release from polymer nanofibers. *Langmuir* v. 24, 965-974 (2008).
123. A.V. Bazilevsky, K. Sun, A.L. Yarin, C.M. Megaridis. Room-temperature, open-air, wet

intercalation of liquids, surfactants, polymers and nanoparticles within nanotubes and microchannels. *J. Materials Chem.* v.18, 696 – 702 (2008). Highlighted in *Chemical Technology*, v. 2008-01, in *Chemistry World* v. 2008-01 (Dec. 21, 2007) and in *Materials Research Society Newsletter* (Jan. 2008).

124. M.K. Tiwari, A.L. Yarin, C.M. Megaridis. Electrospun fibrous nanocomposites as permeable, flexible strain sensors. *J. Appl. Phys.* v. 103, 044305 (2008). Selected for the March 10, 2008 issue of *Virtual Journal of Nanoscale Science & Technology*. The *Virtual Journal* published by the American Institute of Physics and the American Physical Society.
125. T. Han, A.L. Yarin, D.H. Reneker. Viscoelastic electrospun jets: initial stresses and elongational rheometry. *Polymer* v. 49, 1651-1658 (2008).
126. T. Han, A.L. Yarin, D.H. Reneker. Pendulum-like motion of straight electrified jets. *Polymer*, v.49, 2160-2169 (2008).
127. D.H. Reneker, A.L. Yarin. Electrospinning jets and polymer nanofibers. *Polymer*, v. 49, 2387-2425 (2008).
128. A.L. Yarin, C.M. Megaridis, D. Mattia and Y. Gogotsi. Smoothing of nanoscale roughness based on the Kelvin effect. *Nanotechnology* v. 19, 365702 (2008).
129. A.L. Yarin. Stimuli-responsive polymers in nanotechnology: Deposition and possible effect on drug release. *Mathematical Modelling of Natural Phenomena*, v.3, N. 5, 1-15 (2008).
130. J.K. Wise, A.L. Yarin, C.M. Megaridis and M. Cho. Chondrogenic differentiation of human mesenchymal stem cells on oriented nanofibrous scaffolds: Engineering the superficial zone of articular cartilage. *Tissue Eng.* V. 15, N 4, 913-921 (2009).
131. S. Sinha Ray, P. Chando, A.L. Yarin. Enhanced release of liquid from carbon nanotubes due to entrainment by air layer. *Nanotechnology* v. 20, 095711 (2009). Highlighted on NanoTechWeb <http://nanotechweb.org/cws/article/lab/37710>.
132. M. Gandhi, R. Srikar, A.L. Yarin, C.M. Megaridis, R.A. Gemeinhart. Mechanistic examination of protein release from polymer nanofibers. *Molec. Pharm.* V. 6, N 2, 641-647 (2009).
133. M.K. Tiwari, A.V. Bazilevsky, A.L. Yarin, C.M. Megaridis. Elongational and shear rheology of carbon nanotube suspensions-fluids with yield stress. *Rheologica Acta* v. 48, 597-609 (2009).
134. Y. Zhang, A.L. Yarin. Stimuli-responsive copolymers of N-isopropyl acrylamide with enhanced longevity in water for micro- and nanofluidics, drug delivery and non-woven applications. *J. Mater. Chem.* V. 19, 4732-4739 (2009).

135. R. Srikar, A.L. Yarin and C.M. Megaridis. Fluidic delivery of homogeneous solutions through carbon tube bundles. *Nanotechnology* v. 20, 275706 (2009).
136. R. Srikar, T. Gambaryan-Roisman, C. Steffes, P. Stephan, C. Tropea, A.L. Yarin. Nanofiber coating of surfaces for intensification of spray or drop impact cooling. *Int. J. Heat and Mass Transf.* v. 52, 5814-5826 (2009).
137. A.L. Yarin, T. Gambaryan-Roisman, C. Steffes, Nanofasern-was schnelle Computer und Krebsmedizin verbindet. *Forschen Wissenschaftsmagazin, Technische Universitat Darmstadt, N2, 14-17* (2009).
138. T. Miloh, B. Spivak, A.L. Yarin. Needleless electrospinning: electrically-driven instability and multiple jetting from the free surface of a spherical liquid layer. *J. Appl. Phys.* 106, 114910 (2009).
139. S. Sinha-Ray, A.L. Yarin. Flow from macroscopically long straight carbon nanopores for generation of thermo-responsive nanoparticles. *J. Appl. Phys.* 107, 0294903 (2010).
140. S. Sinha Ray, Y. Zhang, D. Placke, C.M. Megaridis, A.L. Yarin. Resins with nano-"raisins". *Langmuir* 26(12) 10243-10249 (2010).
141. A. Lembach, H.B. Tan, I.V. Roisman, T. Gambaryan-Roisman, Y. Zhang, C. Tropea, A.L. Yarin. Drop impact, spreading, splashing and penetration in electrospun nanofiber mats. *Langmuir* 26(12) 9516-9523 (2010).
142. A. Holzmeister, A.L. Yarin, J.H. Wendorff. Barb formation in electrospinning: Experimental and theoretical investigations. *Polymer* v. 51, 2769-2778 (2010).
143. S. Sinha-Ray, A. L. Yarin, B. Pourdeyhimi. Meltblowing: I-Basic physical mechanisms and threadline model. *J. Appl. Phys.* v. 108, 034912 (2010).
144. A. L. Yarin, S. Sinha-Ray, B. Pourdeyhimi. Meltblowing: II-Linear and nonlinear waves on viscoelastic polymer jets. *J. Appl. Phys.* v. 108, 034913 (2010).
145. S. Sinha-Ray, A. L. Yarin, B. Pourdeyhimi. The production of 100/400 nm inner/outer diameter carbon tubes by solution blowing and carbonization of core-shell nanofibers. *Carbon* v. 48, 3575-3578 (2010).
146. G. Malkawi, A.L. Yarin, F. Mashayek. Breakup mechanisms of electrostatic atomization of corn oil and Diesel oil. *J. Appl. Phys.* 108, 064910 (2010).
147. A.L. Yarin. Nanofibers, nanofluidics, nanoparticles and nanobots for drug and protein delivery systems. *Scientia Pharmaceutica*, v. 78, 542-542 (2010).
148. Y. Zhang and A.L. Yarin. Thermo-responsive copolymer coatings for flow regulation

- on demand in glass microcapillaries. *European Physical Journal E*. v. 33, 211-218 (2010).
149. S. Sinha Ray, Y. Zhang, A.L. Yarin. Thorny devil nano-textured fibers: The way to cooling rates of the order of  $1 \text{ kW/cm}^2$ . *Langmuir* 27, 215-226 (2011).
  150. C. M. Weickgenannt, Y. Zhang, A. N. Lembach, I. V. Roisman, T. Gambaryan-Roisman, A. L. Yarin, C. Tropea. Non-isothermal drop impact and evaporation on polymer nanofiber mats. *Physical Review E* v. 83, 036305 (2011).
  151. A.L. Yarin. Coaxial electrospinning and emulsion electrospinning of core-shell fibers. *Polymers Advanced Technologies* v. 22, 310-317 (2011).
  152. S. Chen, H. Hou, F. Harnisch, S. Patil, A.A. Carmona-Martinez, S. Agarwal, Y. Zhang, S. Sinha-Ray, A.L. Yarin, U. Schroder, A. Greiner, Electrospun and solution blown carbon nanofiber nonwovens for application as electrodes in microbial fuel cells. *Energy&Environmental Science* v. 4, 1417-1421 (2011).
  153. Y. Zhang, S. Sinha-Ray, A.L. Yarin. Mechanoresponsive polymer nanoparticles, nanofibers and coatings as drug carriers and components of microfluidic devices. *J. Mater. Chem.* V. 21, 8269-8281 (2011).
  154. S. Sinha Ray, Y. Zhang, A.L. Yarin, S. C. Davis, B. Pourdeyhimi. Solution blowing of soy protein fibers. *Biomacromolecules* v. 12, 2357-2363 (2011).
  155. A.L. Yarin, S. Sinha-Ray, B. Pourdeyhimi. Meltblowing: Multiple jets and fiber-size distribution and lay-down patterns. *Polymer* v. 52, 2929-2938 (2011).
  156. S. Sinha Ray, R.P. Sahu, A.L. Yarin. Nanoencapsulated smart tunable phase change materials. *Soft Matter* v. 7, 8823-8827 (2011).
  157. S. Sinha Ray, R. Srikar, C.C. Lee, A. Li, A.L. Yarin. Shear and elongational rheology of gypsum slurries. *Applied Rheology* v. 21, N 6, 63071 (2011).
  158. C.M. Weickgenannt, Y. Zhang, S. Sinha-Ray, I.V. Roisman, T. Gambaryan-Roisman, C. Tropea, A.L. Yarin. The inverse-Leidenfrost phenomenon on nanofiber mats on hot surfaces. *Phys. Rev. E* v. 84, 036310 (2011).
  159. Y. Zhang, A. L. Yarin. Carbon nanofibers decorated with Poly(furfuryl alcohol)-derived carbon nanoparticles and Tetraethylorthosilicate-derived silica nanoparticles. *Langmuir* v. 27, 14627-14631 (2011).
  160. Sh. Khansari, S. Sinha-Ray, A.L. Yarin, B. Pourdeyhimi. Stress-strain dependence for soy-protein nanofiber mats. *J. Appl. Phys.* V. 111, 044906 (2012).

161. R. Sahu, S. Sinha-Ray, A.L. Yarin, B. Pourdeyhimi. Drop impacts on electrospun nanofiber membranes. *Soft Matter* v. 8, 3957-3970 (2012).
162. M.W. Lee, D.K. Kang, S.S. Yoon, A.L. Yarin. Coalescence of two drops on partially wettable substrates. *Langmuir* v. 28, 3791-3798 (2012).
163. L. Dimesso, C. Spanheimer, W. Jaegermann, Y. Zhang, A. L. Yarin. LiFePO<sub>4</sub> – 3 D carbon nanofiber composites as cathode materials for Li-ions batteries. *J. Appl. Phys.* v. 111, 064307 (2012).
164. S. Jun, D.D. Pelot, A.L. Yarin. Foam consolidation and drainage. *Langmuir* v. 28, 5323-5330(2012).
165. S. Sinha-Ray, D.D. Pelot, Z.P. Zhou, A. Rahman, X.-F. Wu, A.L. Yarin. Encapsulation of self-healing materials by coelectrospinning, emulsion electrospinning and solution blowing and intercalation. *J. Mater. Chem.* v. 22, 9138-9146 (2012).
166. Y.Zhang, A.L. Yarin. Electric current and irreversible Faradaic reaction on electrode in contact with electrolyte. *J. Electrochem. Soc.* v. 159, H787-H791 (2012).
167. A.K. Johnson, A.L. Yarin, F. Mashayek. Packing density and the Kozeny-Carman equation. *Neurosurgery* v. 71, N 5, E1064-E1065 (2012).
168. S. Sinha-Ray, S. Khansari, A. L. Yarin, B. Pourdeyhimi. Effect of chemical and physical cross-linking on tensile characteristics of solution-blown soy protein nanofiber mats. *Industrial & Engineering Chemistry Research* v. 51, 15109-15121 (2012).
169. T. Medeiros Araujo, S. Sinha-Ray, A. Pegoretti, A. L. Yarin. Electrospinning of blend of liquid crystalline polymer with poly(ethylene oxide): vectran nanofiber mats and their mechanical properties. *J. Materials Chem. C* v. 1 (2), 351 - 358 (2013).
170. Sinha-Ray, S., Yarin, A.L., Pourdeyhimi, B. Prediction of angular and mass distribution in meltblown polymer laydown. *Polymer* v. 54, 860-872 (2013).
171. X.F. Wu, A. Rahman, Z. Zhou, D. Pelot, S. Sinha-Ray, B. Chen, S. Payne, A. L. Yarin. Electrospinning core-shell nanofibers for interfacial toughening and self-healing of carbon-fiber/epoxy composites. *J. Appl. Polym. Sc.* v. 129, 1383-1393 (2013).
172. Sinha-Ray, S., Fezzaa, K., Yarin, A.L. The internal structure of suspensions in uniaxial elongation. *J. Appl. Phys.* V. 113, 044906 (2013).
173. Y. Zhang, M. W. Lee, S. An, S. Sinha-Ray, S. Khansari, B. Joshi, S. Hong, J.H. Hong, J.J. Kim, B. Pourdeyhimi, S.S. Yoon, A.L. Yarin. Antibacterial activity of photocatalytic electrospun titania nanofiber mats and solution-blown soy protein

- nanofiber mats decorated with silver nanoparticles. *Catalysis Communications* v. 34, 35-40 (2013).
174. L. Dimesso, C. Spanheimer, W. Jaegermann, Y. Zhang, A. L. Yarin.  $\text{LiCoPO}_4 - 3\text{D}$  carbon nanofiber composites as possible cathode materials for high voltage applications. *Electrochimica Acta* 95, 38-42 (2013).
175. S. Jun, S. Sinha-Ray, A. L. Yarin. Pool boiling on nano-textured surfaces. *International Journal of Heat and Mass Transfer* v. 62, 99-111 (2013).
176. D.D. Pelot, R.P. Sahu, S. Sinha-Ray, A.L. Yarin. Strong squeeze flows of yield-stress fluids: The effect of normal deviatoric stresses. *J. Rheology* v. 57, 719-742 (2013).
177. S. Sinha-Ray, M.W. Lee, S. Sinha-Ray, S. An, B. Pourdeyhimi, S.S. Yoon, A.L. Yarin. Supersonic nanoblowing: A new ultra-stiff phase of nylon 6 in 20-50 nm confinement. *J. Materials Chem. C* v. 1, 3491-3498 (2013).
178. X. Wu, A.L. Yarin. Recent progress in interfacial toughening and damage self-healing of polymer composites based on electrospun and solution-blown nanofibers: An overview. *J. Appl. Polym. Sci.* v. 129, 2225-2237 (2013).
179. S. Sett, S. Sinha-Ray, A.L. Yarin. Gravitational drainage of foam films. *Langmuir* v. 29, 4934-4947 (2013).
180. R.P. Sahu, S. Sinha-Ray, A.L. Yarin, B. Pourdeyhimi. Blowing drops off a filament. *Soft Matter* v. 9, 6053-6071 (2013).
181. B. Rovagnati, A.L. Yarin, F. Mashayek, T. Matsoukas. A reduced model for nanoparticle coating in non-equilibrium plasma. *Physics Letters A* v. 377, 1745-1748 (2013).
182. M.W. Lee, S. Lathe, A.L. Yarin, S.S. Yoon. Dynamic electrowetting-on-dielectric (DEWOD) on unstretched and stretched Teflon. *Langmuir* v. 29, 7758-7767 (2013).
183. T. Shokuhfar, S. Sinha-Ray, C. Sukotjo, A.L. Yarin. Intercalation of anti-inflammatory drug molecules within  $\text{TiO}_2$  nanotubes. *RSC Advances* v. 3, 17380-17386 (2013). This article was covered in the following unsolicited publications: *EurekAlert!.com* on Sept. 21, 2013; *ScienceDaily.com* on Sept. 23, 2013; *KurtzweilNews.com* on Sept. 28, 2013.
184. C Wang, S Sinha-Ray, AL Yarin, T Shokuhfar, R Klie. Electron tomography of hydrated ferritin using carbon nanotube liquid cell. *Microscopy and Microanalysis* 19 (S2), 566-567 (2013).
185. S. Khansari, S. Sinha-Ray, A.L. Yarin, B. Pourdeyhimi. Biopolymer-based nanofiber mats and their mechanical characterization. *Industrial & Engineering Chemistry*



Research v. 52, 15104-15113 (2013).

186. B. Kumar, M. Asadi, D. Pisasale, S. Sinha-Ray, B. Rosen, R. Haasch, J. Abiade, A.L. Yarin, A. Salehi-Khojin. Renewable, metal-free and non-precious carbon nanofiber catalysts for CO<sub>2</sub> reduction. *Nature Communications* 4:2819 | DOI: 10.1038/ncomms3819 ; Dec. 2 (2013).
187. S. Khansari, S. Duzyer, S. Sinha-Ray, A. Hockenberger, A. L. Yarin, B. Pourdeyhimi. Two-stage desorption-controlled release of fluorescent dye and vitamin from solution-blown and electrospun nanofiber mats containing porogens. *Molecular Pharmaceutics* v. 10, 4509-4526 (2013).
188. S. Sinha-Ray, S. Sinha-Ray, H. Sriram, A.L. Yarin. Flow of suspensions of carbon nanotubes carrying phase change materials through microchannels and heat transfer enhancement. *Lab-on-a-Chip* v. 14, 494-508 (2014). Top article, in the Domain of Article 24288141, Since 2014 (publication date of the domain article).
189. S. Sinha-Ray, A.L. Yarin. Drop impact cooling enhancement on nano-textured surfaces. Part I: Theory and results of the ground (1g) experiments. *International Journal of Heat and Mass Transfer* v. 70, 1095-1106 (2014).
190. S. Sinha-Ray, S. Sinha-Ray, A. L. Yarin, C. M. Weickgenannt, J. Emmert, C. Tropea. Drop impact cooling enhancement on nano-textured surfaces. Part II: Results of the parabolic flight experiments [zero gravity (0 g) and supergravity (1.8 g)]. *International Journal of Heat and Mass Transfer* v. 70, 1107-1114 (2014).
191. S. Sett, R. P. Sahu, S. Sinha-Ray, A.L. Yarin. Superspreaders cersus “cousin” non-superspreaders: Disjoining pressure in gravitational film drainage. *Langmuir* v. 30, 2619-2631 (2014).
192. M. W. Lee, S. An, C. Lee, M. Liou, A. L. Yarin, S. S. Yoon. Self-healing transparent core-shell nanofiber coatings for anti-corrosive protection. *J. Materials Chem. A* v. 2, 7045-7053 (2014).
193. D.Y. Kim, S. Sinha-Ray, J.J. Park, J.G. Lee, S.H. Bae, J.H. Ahn, A.L. Yarin, S.S. Yoon. Supersonic blowing: Facile and industrially scalable method for producing self-healing r-GO films. *Advanced Functional Materials* v. 24, 4986-4995 (2014).
194. S. Sinha-Ray, A.L. Yarin, B. Pourdeyhimi. Meltblown fiber mats and their tensile strength. *Polymer* v. 55, 4241-4247 (2014).
195. M. W. Lee, S. An, C. Lee, M. Liou, A. L. Yarin, S. S. Yoon. Hybrid self-healing matrix using core-shell nanofibers and capsuleless micro-droplets. *ACS Applied Materials & Interfaces* v. 6, 10461-10468 (2014).
196. S. An, C. Lee, M. Liou, H. S. Jo, J.-J. Park, A. L. Yarin, S. S. Yoon. Supersonically

blown ultra-thin thorny devil nanofibers for efficient air cooling. *ACS Applied Materials & Interfaces* v. 6, 13657-13666 (2014).

197. S. Sett, R.P. Sahu, D.D. Pelot, A.L. Yarin. Enhanced foamability of sodium dodecyl sulfate mixed with superspreader trisiloxane-(poly)ethoxylate. *Langmuir* 30, 14765-14775 (2014).
198. S. Sinha Ray, S. Sinha Ray, A.L. Yarin, B. Pourdeyhimi. Theoretical and experimental investigation of physical mechanisms responsible for polymer nanofiber formation in solution blowing. *Polymer* 56, 452-463 (2015).
199. R.P. Sahu, S. Sett, A.L. Yarin, B. Pourdeyhimi. Impact of aqueous suspension drops onto non-wettable membranes: hydrodynamic focusing and penetration of nanoparticles. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 467, 31-45 (2015).
200. S. Sett, M.W. Lee, M. Weith, B. Pourdeyhimi, A.L. Yarin. Biodegradable and biocompatible soy protein/polymer/adhesive sticky nano-textured interfacial membranes for prevention of esca fungi invasion into pruning cuts and wounds of vines. *J. Materials Chem. B* v. 3, 2147-2162 (2015). Highlighted in the unsolicited article in *Chemistry World of the Royal Society of Chemistry* on Jan. 27, 2015. Also, in the unsolicited article in *RÃ©ussir Vigne* of november (nÂ°223, page 15).
201. S. Sinha-Ray, S. Sinha-Ray, B. Pourdeyhimi, A.L. Yarin. Application of solution-blown 20-50 nm nanofibers in filtration of nanoparticles: The efficient van der Waals collectors. *J. Membrane Sci.* v. 485, 132-150 (2015).
202. D.D. Pelot, S. Jun, A.L. Yarin. Bentonite dispersions: transition from liquid-like to solid-like behavior and cracking. *J. Non-Newton. Fluid Mech.* v. 219, 50-64 (2015).
203. H. Yoon, M. G. Mali, J. Y. Choi, M. Kim, S. K. Choi, H. Park, S. S. Al-Deyab, M. T. Swihart, A. L. Yarin, S. S. Yoon. Nano-textured pillars of electrospayed bismuth vanadate for efficient photoelectrochemical water splitting. *Langmuir* v. 31, 3727-3737 (2015).
204. R. P. Sahu, S. Sinha Ray, S. Sinha Ray, A. L. Yarin. Pool boiling on nano-textured surfaces comprised of electrically-assisted supersonically solution-blown, copper-plated nanofibers: Experiments and theory. *Int. J. Heat and Mass Transf.* v 87, 521-535 (2015).
205. A. Hamlekhan, S. Sinha-Ray, C. Takoudis, M. Mathew, S. Sukotjo, A.L. Yarin, T. Shokuhfar. Fabrication of drug eluting implants: Study of drug release mechanism from titanium dioxide nanotubes. *J.Phys. D* v. 48, 75401-75401 (2015).
206. S. Sett, S. I. Karakashev, S. K. Smoukov, A. L. Yarin. Ion-specific effects in foams. *Advances in Colloid and Interface Science* v. 225, 98-113 (2015).
207. M. W. Lee, S. An, H. S. Jo, S. S. Yoon, A. L. Yarin. Self-healing nanofiber-reinforced

- polymer composites: 1. Tensile testing and recovery of mechanical properties. *ACS Applied Materials & Interfaces* v. 7, N 35, 19546-19554 (2015).
208. M.W. Lee, S. An, H.S. Jo, S.S. Yoon, A.L. Yarin. Self-healing nanofiber-reinforced polymer composites: 2. Delamination/debonding, and adhesive and cohesive properties. *ACS Appl. Mater. Interfaces* v.7, N 35, 19555-19561 (2015).
209. S. An, M. Liou, K. Y. Song, H. S. Jo, M. W. Lee, S. S. Al-Deyab, A. L. Yarin, S. S. Yoon. Highly flexible transparent self-healing composite based on electrospun core-shell nanofibers produced by coaxial electrospinning for anti-corrosion and electrical insulation. *Nanoscale* v. 7, 17778-17785 (2015).
210. M. W. Lee, S. An, K. Y. Song, B. N. Joshi, H. S. Jo, S. S. Al-Deyab, S. S. Yoon, A. L. Yarin. Polyacrylonitrile nanofibers with added Zeolitic Imidazolate Frameworks (ZIF-7) to enhance mechanical and thermal stability. *J. Appl. Phys.* v. 118, 245307 (2015).
211. M. Freystein, F. Kolberg, L. Spiegel, S. Sinha-Ray, R. P. Sahu, A. L. Yarin, T. Gambaryan-Roisman, P. Stephan. Trains of Taylor bubbles over hot nano-textured mini-channel surface. *Int. J. Heat and Mass Transf.* v. 93, 827–833 (2016).
212. S. Sett, R.P. Sahu, S. Sinha-Ray, A.L. Yarin. Experimental investigation of eletrokinetic stabilization of gravitational drainage of ionic surfactants films. *Electrochimica Acta* v. 187, 693-703 (2016).
213. R. P. Sahu, S. Sinha-Ray, S. Sinha-Ray, A. L. Yarin. Pool boiling of Novec 7300 and self-wetting fluids on electrically-assisted supersonically solution-blown, copper-plated nanofibers. *Int. J. Heat and Mass Transf.* v. 95, 83-93 (2016).
214. V.K. Patel, J. Seyed-Yagoobi, S. Sinha-Ray, S. Sinha-Ray, A. Yarin. EHD conduction pumping driven liquid film Flow boiling on bare- and nanofiber-enhanced surfaces, *ASME J. of Heat Transf.* v. 138, 041501(2016).
215. S. Zupancic, S. Sinha-Ray, S. Sinha-Ray, J. Kristl, A. L. Yarin. Long-term sustained Ciprofloxacin release from PMMA and hydrophilic polymer blended nanofibers. *Molec. Pharm.* v. 13, 295-305 (2016).
216. D.Y. Kim, J.G. Lee, B. Joshi, J.H. Lee, S. S. Al-Deyab, H. G. Yoon, D. R. Yang, A. Yarin, S. S. Yoon Supersonically sprayed thermal barrier layers using clay micro-particles. *Applied Clay Science.* V.120, 142-146 (2016).
217. B. Bang, H.-S. Park, J.-H. Kim, S. S. Al-Deyab, A. L. Yarin, S. S. Yoon. Simplified method for estimating the effect of a hydrogen explosion on a nearby pipeline. *Journal of Loss Prevention in the Process Industries* v. 40, 112-116 (2016).

218. A. Kolbasov, S. Sinha-Ray, A. Joijode, M.A. Hassan, D. Brown, B. Maze, B. Pourdeyhimi, A.L. Yarin. Industrial-scale solution blowing of soy protein nanofibers. *Industrial & Engineering Chemistry Research* v. 55, 323-333 (2016).
219. A.Ghosal, S. Sinha-Ray, A.L. Yarin, B. Pourdeyhimi. Numerical prediction of the effect of uptake velocity on three-dimensional structure, porosity and permeability of meltblown nonwoven laydown. *Polymer* v. 85, 19-27 (2016).
220. S. An, H. S. Jo, S. S. Al-Deyab, A. L. Yarin, S. S. Yoon. Nano-textured copper oxide nanofibers for efficient air cooling. *J. Appl. Phys.* V. 119, 065306 (2016).
221. M.W. Lee, S.S. Yoon, A.L. Yarin. Solution-blown core-shell self-healing nano- and microfibers. *ACS Appl. Mater. Interfaces* v. 8, 4955-4962 (2016).
222. D.D. Pelot, N. Klep, A.L. Yarin. Spreading of Carbopol gels. *Rheologica Acta* v. 55, 279-291 (2016).
223. S. Zupancic, S. Sinha-Ray, S. Sinha-Ray, J. Kristl, A. L. Yarin. Controlled release of ciprofloxacin from core-shell nanofibers with monolithic or blended core. *Molec. Pharm.* v. 13, 1393-1404 (2016).
224. S. Sett, K. Stephansen, A.L. Yarin. Solution-blown nanofiber mats from fish sarcoplasmic protein. *Polymer* v.93, 78-87 (2016).
225. S. An, H. S. Jo, D.-Y. Kim, H. J. Lee, B.-K. Ju, S. S. Al-Deyab, J.-H. Ahn, Y. Qin, M. T. Swihart, A. L. Yarin, S. S. Yoon. Self-junctioned copper nanofiber transparent flexible conducting film via electrospinning and electroplating. *Adv. Mat.* V.28, 7149-7154 (2016).
226. S.-P. Fu, R. P. Sahu, E. Diaz, J. R. Robles, C. Chen, X. Rui, R. F. Klie, A. L. Yarin, J. T. Abiade. A dynamic study of liquid drop impact on supercooled cerium dioxide: Anti-icing behavior. *Langmuir* v. 32 (24), 6148–6162 (2016).
227. H. Yoon, M. Kim, H. Kim, D.-Y. Kim, S. An, J.-G. Lee, B.N. Joshi, H.S. Jo, J. Choi, S.S. Al-Deyab, A.L. Yarin, S.S. Yoon. Efficient heat removal via thorny devil nanofiber, silver nanowire, and graphene nanotextured surfaces. *Int. J. Heat and Mass Transfer* v. 101, 198-204 (2016).
228. C. Staszal, S. Sett, A.L. Yarin, B. Pourdeyhimi. Sintering of compound nonwovens by forced convection of hot air. *Int. J. Heat and Mass Transfer* v. 101, 327-335 (2016).
229. A.L. Yarin, S. Agarwal. Buckling and unraveling Poly(N-isopropyl acrylamide)-Thermoplastic Polyurethane bilayers. *Polymer* v. 87, 604-613 (2016).
230. P. M. Comiskey, A. L. Yarin, S. Kim, D. Attinger. Prediction of blood backspatter from a gunshot in bloodstain pattern analysis. *Physical Rev. Fluids* v. 1, 043201 (2016).

231. M.W. Lee, S. Sett, S.S. Yoon, A.L. Yarin. Fatigue of self-healing nanofiber-based composites: static test and subcritical crack propagation. *ACS Appl. Mater. Interfaces* v. 8, 18462-18470 (2016).
232. B. H. Bang, C. S. Ahn, D. Y. Kim, J. G. Lee, H. M. Kim, J. T. Jeong, W. S. Yoon, S. S. Al-Deyab, J. H. Yoo, S. S. Yoon, A. L. Yarin. Breakup process of cylindrical viscous liquid specimens after a strong explosion in the core. *Phys. Fluids* 28, 094105 (2016).
233. S. Sinha-Ray, W. Zhang, R. P. Sahu, S. Sinha-Ray, A. L. Yarin. Pool boiling of Novec 7300 and DI water on nano-textured heater covered with supersonically blown or electrospun polymer nanofibers. *Int. J. Heat Mass Transf.* v. 106, 482-490 (2016).
234. A. Kolbasov, P.M. Comiskey, R. P. Sahu, S. Sinha-Ray, A. L. Yarin, B. S. Sikarwar, S. Kim, T.Z. Jubery, D. Attinger. Blood rheology in shear and uniaxial elongation. *Rheologica Acta* v. 55, 901-908 (2016).
235. M. W. Lee, S. Sett, S. S. Yoon, A. L. Yarin. Self-healing of nanofiber-based composites in the course of stretching. *Polymer* v. 103, 180-188 (2016).
236. A. Ghosal, S. Sinha-Ray, S. Sinha-Ray, A.L. Yarin, B. Pourdeyhimi. Numerical modeling and experimental study of solution-blown nonwovens formed on a rotating drum. *Polymer* 105, 255-263 (2016).
237. B. Bang, H. Park, J. Kim, S. S. Al-Deyab, A. L. Yarin, S. S. Yoon.  
Analytical and numerical assessments of local overpressure from hydrogen gas explosions in petrochemical plants. *Fire and Materials* 41, 587-597 (2017).
238. J.-G. Lee, D.-Y. Kim, J.-H. Lee, S. Sinha-Ray, A.L. Yarin, M.T. Swihart, D. Kim, S.S. Yoon. Production of flexible transparent conducting films of self-fused nanowires via one-step supersonic spraying. *Adv. Funct. Mat.* v. 27, 1602548 (2017).
239. H. S. Jo, S. An, J.-G. Lee, H. G. Park, S. S. Al-Deyab, A. L. Yarin, S. S. Yoon. Highly flexible, stretchable, patternable, transparent copper fiber heater on a complex 3D surface. *NPG Asia Materials* v.9, e347 (2017).
240. A. Sankaran, C. Staszal, R.P. Sahu, A.L. Yarin, F. Mashayek. Evidence of faradaic reactions in electrostatic atomizers. *Langmuir* v. 23, 1375-1384 (2017).
241. S. Sinha-Ray, W. Zhang, B. Stoltz1, R. P. Sahu, S. Sinha-Ray, A. L. Yarin. Swing-like pool boiling on nano-textured surfaces for microgravity applications related to cooling of high-power microelectronics. *Nature Microgravity* 3:9 (2017).
242. S. Jiang, G. Duan, U. Kuhn, M. Mörl, V. Altstädt, A.L. Yarin, A. Greiner. Spongy gels

- by top-down approach from polymer fibrous sponges. *Angewandte Chemie, Int. Ed.* v. 56, 3285-3288 (2017).
243. S. Fischer, R.P. Sahu, S. Sinha-Ray, A.L. Yarin, T. Gambaryan-Roisman, P. Stephan. Effect of nano-textured heater surfaces on evaporation at a single meniscus. *Int. J. Heat and Mass Transf.* v. 108, 2444-2450 (2017).
244. C. Staszal, S. Sinha-Ray, A.L. Yarin. Adhesion of blended polymer film. *Polymer* v. 112, 92-101 (2017).
245. S. An, J.-H. Hong, K.Y. Song, M.W. Lee, S.S. Al-Deyab, J.-J. Kim, A.L. Yarin, S.S. Yoon. Prevention of mold invasion by eco-friendly lignin/polycaprolactone nanofiber membranes for amelioration of public hygiene. *Cellulose* v. 24, 951-965 (2017).
246. A. Kolbasov, S. Sinha-Ray, A.L. Yarin, B. Pourdeyhimi. Heavy metal adsorption on solution-blown biopolymer nanofiber membranes. *J. Membrane Sci.* v. 530, 250-263 (2017).
247. J.-G. Lee, D.-Y. Kim, T.-G. Kim, J.-H. Lee, S.S. Al-Deyab, H. W. Lee, J. S. Kim, D. H. Yang, A.L. Yarin, S.S. Yoon. Supersonically sprayed copper-nickel microparticles as flexible and printable thin-film high-temperature heaters. *Adv. Mat. Interfaces* 1700075 (2017).
248. M.W. Lee, S.S. Yoon, A.L. Yarin. Release of self-healing agents in a material: What happens next? *ACS Applied Materials & Interfaces*, v. 9, 17449-17455 (2017).
249. J.-G. Lee, J.-H. Lee, S. An, D.-Y. Kim, T.-G. Kim, S. S. Al-Deyab, A.L. Yarin, S.S. Yoon. Highly flexible, stretchable, wearable, patternable, transparent heaters on complex 3D surfaces formed from supersonically sprayed silver nanowires. *J. Mater. Chem. A*, v. 5, 6677-6685 (2017).
250. S. An, Y.I. Kim, S. Sinha-Ray, M.-W. Kim, H. S. Jo, M.T. Swihart, A.L. Yarin, S.S. Yoon. Facile processes for producing robust, transparent, conductive platinum nanofiber mats. *Nanoscale* 9, 6076–6084 (2017).
251. P.M. Comiskey, A.L. Yarin, D. Attinger. High-speed video analysis of forward and backward spattered blood droplets. *Forensic Science International*, 276, 134-141 (2017).
252. S. Duzyer, S. Sinha-Ray, S. Sinha-Ray, A.L. Yarin. Transparent conducting electrodes from conducting polymer nanofibers and their application as thin-film heaters. *Macromolecular Materials and Engineering* 1700188 (2017).
253. S. An, H.S. Jo, Y.I. Kim, K.Y. Song, M.W. Kim, K.B. Lee, A.L. Yarin, S.S. Yoon. Bio-inspired, colorful, flexible, defrostable light-scattering hybrid films for

- effective distribution of LED light. *Nanoscale*, v. 9, 9139-9147 (2017).
254. S. An, Y.I. Kim, H.S. Jo, M.-W. Kim, M.W. Lee, A.L. Yarin, S.S. Yoon. Silver-decorated and palladium-coated copper-electroplated fibers derived from electrospun Polymer nanofibers. *Chemical Engineering Journal* v.327, 336-342 (2017).
255. M.W. Lee, H.S. Jo, S.S. Yoon, A.L. Yarin. Thermally-driven self-healing using copper nanofiber heater. *Appl. Phys. Lett.* v. 111, 011902 (2017).
256. P.M. Comiskey, A.L. Yarin, D. Attinger. Hydrodynamics of back spatter by blunt bullet gunshot with a link to bloodstain pattern analysis. *Phys. Rev. Fluids* 073906 (2017).
257. M.W. Lee, S. Sett, S. An, S.S. Yoon, A.L. Yarin. Self-healing nano-textured vascular-like materials: Mode I crack propagation. *ACS Applied Materials & Interfaces* 9, 27223-27231 (2017).
258. B.-H. Bang, C.-S. Ahn, J.-G. Lee, Y.-T. Kim, M.-H. Lee, B. Horn, D. Malik, K. Thomas, S.C. James, A.L. Yarin, S.S. Yoon. Theoretical, numerical, and experimental investigation of pressure rise due to deflagration in confined spaces. *International Journal of Thermal Sciences* v. 120, 469-480 (2017).
259. W. Zhang, R. Vilensky, E. Zussman, A.L. Yarin. Adsorption and mass transfer in granular porous membranes/media due to inserted volatile materials. *Int. J. Heat Mass Transf.* 116, 248-258 (2017).
260. J.-G. Lee, S. An, T.-G. Kim, M.-W. Kim, H.-S. Jo, M. T. Swihart, A. L. Yarin, S. S. Yoon. Self-cleaning anticondensing glass via supersonic spraying of silver nanowires, silica, and polystyrene nanoparticles. *ACS Applied Materials & Interfaces* 9, 35325-35332 (2017).
261. S. An, Y. I. Kim, M. W. Lee, A.L. Yarin, S.S. Yoon. Wetting and coalescence of drops of self-healing agents on electrospun nanofiber mats. *Langmuir* 33, 10663-10672 (2017).
262. S. An, Y. I. Kim, J.Y. Yoon, A. L. Yarin, S. S. Yoon. Wetting of inclined nano-textured surfaces by self-healing agents. *Appl. Phys. Lett.* 111, 234101 (2017).
263. M.W. Lee, S. An, Y.-I. Kim, S.S. Yoon, A.L. Yarin. Self-healing three-dimensional bulk materials based on core-shell nanofibers. *Chem. Eng. J.* 334, 1093-1100 (2018).
264. S. An, Y. I. Kim, H. S. Jo, M.-W. Kim, M. T. Swihart, A. L. Yarin, S. S. Yoon. Oxidation-resistant metallized nanofibers as transparent conducting films and heaters. *Acta Materialia* 143, 174-180 (2018).
265. W. Zhang, E. Zussman, A.L. Yarin. Detection of vapor released from sublimating materials encased in porous medium. *Int. J. Heat and Mass Transf.* 118, 1357-1372 (2018).

266. C. Staszal, A.L. Yarin, B. Pourdeyhimi. Polymer adhesion in heat-treated nonwovens. *J. Appl. Polym. Sci.* 46165 (2018).
267. M.W. Lee, S. An, S.S. Yoon, A.L. Yarin. Advances in self-healing materials based on vascular networks with mechanical self-repair characteristics. *Advances in Colloid and Interface Science* v. 252, 21-37 (2018).
268. D. Dannessa, S. Sinha-Ray, S. Jun, A. L. Yarin. Jets of three-phase power-law fluids and foam jet mixing in gypsum slurry. *Construction & Building Materials* 166, 922-944 (2018).
269. A. Sankaran, A.L. Yarin. Evaporation-driven thermocapillary Marangoni convection in liquid layers of different depths. *Int. J. Heat and Mass Transf.* 122, 504–514 (2018).
270. A. Sankaran, C. Staszal, F. Mashayek, A. L. Yarin. Faradaic reactions' mechanisms and parameters in charging of oils. *Electrochimica Acta* 268, 173-186 (2018).
271. S. An, M.W. Lee, A.L. Yarin, S.S. Yoon. A review on corrosion-protective extrinsic self-healing: comparison of microcapsule-based systems and those based on core-shell vascular networks. *Chem. Eng. J.* 344, 206-220 (2018).
272. P.M. Comiskey, A.L. Yarin. Friction coefficient of an intact free liquid jet moving in air. *Experiments in Fluids* 59:65 (2018).
273. M.-W. Kim, S. An, K. Kim, T.-G. Kim, H. S. Jo, D.-H. Park, S. S. Yoon, A. L. Yarin. Packing of metalized polymer nanofibers for aneurysm embolization. *Nanoscale* 10, 6589-6601 (2018).
274. W. Zhang, C. Staszal, A.L. Yarin, E. Shim, B. Pourdeyhimi. Point-bonded polymer nonwovens and their rupture in stretching. *Polymer* v. 146, 209-221 (2018).
275. P.M. Comiskey, A.L. Yarin, D. Attinger. Theoretical and experimental investigation of forward spatter of blood from a gunshot. *Physical Review Fluids* 3, 063901 (2018).
276. V. Yurkiv, A. L. Yarin, F. Mashayek. Modeling of droplet impact onto polarized and non-polarized dielectric surfaces. *Langmuir* 34, 10169–10180 (2018).
277. S. An, D.J. Kang, A.L. Yarin. A blister-like soft nano-textured thermo-pneumatic actuator as an artificial muscle. *Nanoscale* 10, 16591-16600 (2018).
278. A. Sankaran, W. Zhang, A. L. Yarin. Pool boiling in deep and shallow vessels and the effect of surface nano-texture and self-rewetting. *International Journal of Heat and Mass Transfer* 127, 857-866 (2018).
279. C. Staszal, A. L. Yarin. Exponential vaporization fronts and critical heat flux in pool boiling. *International Communications in Heat and Mass Transfer* 98, 171-176 (2018).



280. M. Ogawa, A.B. Aljedaani, E.Q. Li, S.T. Thoroddsen, A.L. Yarin. Evolution of toroidal free-rim perturbations on an expanding circular liquid sheet. *Exps. Fluids* 59: 148, 1-18 (2018).
281. H. S. Jo, H.-J. Kwon, T.-G. Kim, C.-W. Park, S. An, A. L. Yarin, S. S. Yoon. Wearable transparent thermal sensors and heaters based on metal-plated fibers and nanowires. *Nanoscale* 2018, 10, 19825–19834 (2018).
282. S. An, A. Sankaran, A. L. Yarin. Natural biopolymer-based triboelectric nanogenerators via fast, facile, scalable solution blowing. *ACS Applied Materials & Interfaces* 10, 37749–37759 (2018).
283. M. Boas, M. Burman, A. L. Yarin, E. Zussman. Electrically-responsive deformation of polyelectrolyte complex (PEC) fibrous membrane. *Polymer* 158, 262–269 (2018).
284. G. Li, C. Staszal, A. L. Yarin, B. Pourdeyhimi. Hydroentanglement of polymer nonwovens. 1: Experimental and theoretical/numerical framework. *Polymer* 164, 191–204 (2019).
285. G. Li, C. Staszal, A. L. Yarin, B. Pourdeyhimi. Hydroentanglement of polymer nonwovens. 2: Simulation of multiple polymer fibers and prediction of entanglement. *Polymer* 164, 205–216 (2019).
286. B. Kashir, A. E. Perri, A. L. Yarin, F. Mashayek. Numerical investigation of ionic conductor liquid charging at low to high voltages. *Phys. Fluids Phys. Fluids* 31, 021201(1)-021201(17) (2019).
287. A. Sankaran, S.I. Karakashev, S. Sett, N. Grozev, A.L. Yarin. On the nature of the superspreaders. *Advances in Colloid and Interface Science* 263, 1–18 (2019).
288. D. J. Kang, S. An, A. L. Yarin, S. Anand. Programmable soft robotics based on nano-textured thermo-responsive actuators. *Nanoscale* 11, 2065–2070 (2019).
289. C. Staszal, S. Sinha-Ray, A.L. Yarin. Forced vibration of a heated wire subjected to nucleate boiling. *Int. J. Heat and Mass Transf.* 135, 44-51 (2019).
290. D. Attinger, K. P.M. Comiskey, A.L. Yarin, K. de Brabanter. Determining the region of origin of blood spatters using probabilities and fluid dynamics. *Forensic Science International* 298, 323-331 (2019).
291. C.-S. Ahn, C.-W. Park, M.-W. Kim, T.-G. Kim, S.C. James, Y. Yoon, A.L. Yarin, S.S. Yoon. Experimental and numerical investigation of smoke dynamics in vertical cylinders and open-air environment. *Int. J. Heat and Mass Transf.* 135, 985-995 (2019).
292. Y.I. Kim, S. An, M.-W. Kim, H.-S. Jo, T.-G. Kim, M. T. Swihart, A.L. Yarin, S.S. Yoon. Highly transparent, conducting, body-attachable metallized fibers as a flexible and stretchable film. *Journal of Alloys and Compounds* 790, 1127-1136 (2019).
293. A. L. Yarin, K. Schuster, E. Zussman. Pressure field generated in porous medium by air jet injected through the surface. *Phys. Fluids* 31, 046601 (2019).

294. A. Kolbasov, S. Sinha-Ray, A.L. Yarin. Theoretical and experimental study of punched laminate composites protected by outer paper layer. *J. Mech. and Phys. of Solids* 128, 117-136 (2019). Unsolicited highlight: Butter Physics Week 07/09/2019.
295. A. Sankaran, C. Staszal, D. Belknap, A.L. Yarin, F. Mashayek. Effect of atmospheric humidity on electrical conductivity of oil and implications in electrostatic atomization. *Fuel* 253, 283-292 (2019).
296. P.M. Comiskey, D. Attinger, A.L. Yarin. Implications of Two Backward Blood Spatter Models based on fluid dynamics for bloodstain pattern analysis. *Forensic Science International, Forensic Science International* 301, 299–305 (2019).
297. B.-H. Bang, Y.-I. Kim, S. Jeong, Y. Yoon, S.C. James, A. L. Yarin, S. S. Yoon. Theoretical model for swirling thin film flow inside nozzles of various geometries. *Applied Mathematical Modelling* 76, 607–616 (2019).
298. J.-M. Löwe, J. Plog, Y. Jiang, Y. Pan, A.L. Yarin. Drop deposition affected by electrowetting in direct ink writing process. *J. Appl. Phys.* 126, 035302 (2019).
299. M.-W. Kim, S. An, H. Seok, S.S. Yoon, Alexander L. Yarin. Electrostatic transparent air filter membranes comprising metallized microfibers for particulate removal. *ACS Applied Materials & Interfaces* 11, 26323–26332 (2019).
300. P.M. Comiskey, A.L. Yarin, D. Attinger. Hydrodynamics of forward blood spattering caused by a bullet of general shape. *Phys. Fluids* 31, 084103 (2019).

**Papers in professional journals published in Russian and translated into English in the USA afterwards.**

1. K.E. Dzhaugashtin and A.L. Yarin, "Numerical simulation of non-self-similar wall jet", *J. Engineering Physics*, 32, No. 4, 420-426 (1977).
2. K.E. Dzhaugashtin and A.L. Yarin, "Combustion process in laminar homogeneous gas jets", *Combustion, Explosion and Shock Waves*, 14, No. 3, 321-327 (1978).
3. K.E. Dzhaugashtin and A.L. Yarin, "Combustion in laminar diffusion gas jets", *Combustion, Explosion and Shock Waves*, 15, No. 1, 92-95 (1979).
4. Yu. V. Lapin and A.L. Yarin, "The matching problem in the theory of nonequilibrium turbulent flows near a wall", *Fluid Dynamics*, 14, No. 3, 350 - 357 (1979).
5. A.L. Yarin, "Stability of a jet of visco-elastic liquid in the presence of a mass flux at its surface", *J. Engineering Physics*, 37, No. 2, 904-910 (1979).
6. A.L. Yarin, "Stability of the surface of burning elastoviscous liquid", *J. Engineering Physics*, 37, No. 2, 343-344 (1980).

7. V.M. Entov, V.I. Kordonskii, V.A. Kuz'min, Z.P. Shul'man and A.L. Yarin, "Investigation of the decomposition of jets of rheologically complex liquids", *J. Applied Mechanics and Technical Physics*, 21, No. 3, 365-371 (1980).
8. V.M. Entov and A.L. Yarin, "Transverse stability of a liquid jet in a counterflowing air stream", *J. Engineering Physics*, 38, No. 5, 495-500 (1980).
9. V.M. Entov and A.L. Yarin, "Dynamical equations for a liquid jet", *Fluid Dynamics*, 15, No. 5, 644 - 649 (1980).
10. K.E. Dzhaugashtin and A.L. Yarin, "Grazing flame core of unmixed gases", *Combustion, Explosion and Shock Waves*, 17, No. 3, 283-289 (1981).
11. A.L. Yarin, "Dynamics of bending disturbances of nonlinear viscous liquid jets in air", *J. Applied Mechanics and Technical Physics*, 23, No. 1, 39-43 (1982).
12. A.L. Yarin, "A numerical investigation of the bending instability of thin jets of liquid", *J. Applied Mechanics and Technical Physics*, 23, No. 4, 498-502 (1982).
13. V.B. Librovich and A.L. Yarin, "Effect of mechanical stresses on the combustion rate of mixed solid propellants", *Combustion, Explosion and Shock Waves*, 18, No. 5, 547-551 (1982).
14. A.L. Yarin, "Stationary configurations of fibres formed under nonisothermal conditions", *J. Applied Mechanics and Technical Physics*, 23, No. 6, 865-870 (1982).
15. E. Bekturganov, K.E. Dzhaugashtin, Z.B. Sakipov and A.L. Yarin. "Jet flow over a moving wall". *Fluid Mechanics - Soviet Research*, v. 11, N 3, 14-24 (1982).
16. A.L. Yarin, "Detachment of the flame of a burning liquid by an air flow", *Combustion, Explosion and Shock Waves*, 19, No. 1, 1-8 (1983).
17. A.L. Yarin, "On the dynamical equations for liquid jets", *Fluid Dynamics*, 18, No. 1, 134-136 (1983).
18. V.S. Berman and A.L. Yarin, "Dynamical regimes of fiber spinning", *Fluid Dynamics*, 18, No. 6, 856-862 (1983).
19. A.L. Yarin, "On generation of self-sustained oscillations during fiber formation", *PMM USSR (Applied Mathematics and Mechanics)*, 47, No. 1, 59-64 (1983).
20. V.M. Entov and A.L. Yarin, "Influence of elastic stresses on the capillary breakup of jets of dilute polymer solutions", *Fluid Dynamics*, 19, No. 1, 21-29 (1984).
21. A.L. Yarin, "Aerodynamics of a gas flame serving as a source of solid particles", *Combustion, Explosion and Shock Waves*, 20, No. 6, 686 - 689 (1984).

22. M.T. Murzabayev and A.L. Yarin, "Dynamics of sprinkler jets", *Fluid Dynamics*, 20, No. 5, 715-722 (1985).
23. V.M. Entov, F.M. Sultanov and A.L. Yarin, "Breakup of liquid films under the action of a pressure drop in the ambient gas", *Soviet Physics Doklady*, 30, No. 10, 882-884 (1985).
24. V.M. Entov, A.N. Rozhkov, U.F. Feizkhanov and A.L. Yarin, "Dynamics of liquid films. Plane films with free rims", *J. Applied Mechanics and Technical Physics*, 27, No. 1, 41-47 (1986).
25. A.L. Yarin, "Effect of heat removal on nonsteady regimes of fiber formation", *J. Engineering Physics*, 50, No. 5, 569-575 (1986).
26. F.M. Sultanov and A.L. Yarin, "Radial expansion of cylindrical layers of viscous and rheologically complex fluids", *J. Engineering Physics*, 50, No. 6, 645-652 (1986).
27. V.M. Entov, F.M. Sultanov and A.L. Yarin, "Disintegration of liquid films subjected to an ambient gas pressure difference", *Fluid Dynamics*, 21, No. 3, 376-383 (1986).
28. V.M. Entov, A.N. Rozhkov, U.F. Feizkhanov and A.L. Yarin, "Propagation of small bending perturbations over plane films of water and polymer solutions", *J. Applied Mechanics and Technical Physics*, 27, No. 4, 515-522 (1986).
29. A.L. Yarin, "Flexural perturbations of free jets of Maxwell and Doi-Edwards liquids", *J. Applied Mechanics and Technical Physics*, 27, No. 6, 828-836 (1986).
30. A.L. Yarin, "Vortex motion in dilute polymer solutions", *J. Engineering Physics*, 53, No. 2, 897-902 (1987).
31. A.L. Yarin, "Hierarchy of relaxation times and rheological constitutive equations for concentrated solutions and melts of polymers", *Soviet Physics Doklady*, 32, No. 2, 157-159 (1987).
32. S. Radev, B. Tchavdarov and A.L. Yarin, "Buckling of thin liquid jets and threads", *Fluid Dynamics*, 22, No. 4, 525-532 (1987).
33. A.L. Yarin, "Collective hydrodynamic effects in disperse systems", *Soviet Physics JETP*, 66, No. 4, 709-711 (1987).
34. V.M. Entov and A.L. Yarin, "A problem of capillary hydrodynamics", *Fluid Dynamics*, 22, No. 6, 909-915 (1987).
35. Kh.S. Kestenboim, L.I. Sharchevich and A.L. Yarin, "Swirling films of Newtonian and viscoelastic liquids", *Fluid Dynamics*, 23, No. 3, 463-471 (1988).
36. T.M. Getmanyuk and A.L. Yarin, "Fluid dynamics and mass transfer in the fibre spinning", *J. Engineering Physics*, 55, No. 1, 737-744 (1988).

37. G.A. Belinskii, T.M. Getmanyuk, V.G. Kulichikhin and A.L. Yarin, "On concentrated polymer solutions flow in model channels", *J. Engineering Physics*, 55, No. 1, 745-750 (1988).
38. F.M. Sultanov and A.L. Yarin, "Rayleigh-Taylor instability of expanded polymer films", *J. Applied Mechanics and Technical Physics*, 29, No. 3, 409-414 (1988).
39. V.M. Entov, V.I. Kordonskii, I.V. Prokhorov, A.N. Rozhkov, A.I. Toropov, Z.P. Shul'man and A.L. Yarin, "Strong stretching of polymer solutions", *Soviet Physics Doklady*, 33, No. 8, 628-630 (1988).
40. V.M. Entov, V.I. Kordonskii, I.V. Prokhorov, A.N. Rozhkov, A.I. Toropov, Z.P. Shul'man and A.L. Yarin, "Strong stretching of polymer solutions of moderate concentration", *Polymer Science USSR*, 30A, No. 12, 2486-2491 (1988).
41. A.L. Yarin, "Theoretical study of the strong uniaxial elongation of concentrated polymeric systems in the case of constant velocity of clamp motion", *Polymer Science USSR*, 30A, No. 12, 2492-2497 (1988).
42. V.V. Grigor'yants, V.M. Entov, G.E. Ivanov, Yu. K. Chamorovskii and A.L. Yarin, "Formation of two-layer preforms for optical fibers with shaped cores", *Soviet Physics Doklady*, 34, No. 4, 368-370 (1989).
43. T.M. Getmanyuk, V.G. Kulichikhin and A.L. Yarin, "Dynamics and kinematics of the process of spinning of man-made fibers by the wet method", *Chemical Fibres*, v.20, 114-117 (1989).
44. T.M. Getmanyuk, A.L. Yarin, I.M. Velikanova, L.P. Braverman and R.G. Papernik, "Some features of spinning hollow fibers from polycarbonatesiloxane melt", *Fibre Chemistry*, v. 21, N3, 235-239 (1990).
45. A.L. Yarin, "Hydrodynamic analysis of the process of formation three-layer optical fibers and calculation of the field of elastic stresses and birefringence"; *J. Applied Mechanics and Technical Physics* , 31, No. 3, 361-367 (1990).
46. F.M. Sultanov and A.L. Yarin, "Droplet size distribution in a percolation model for explosive liquid dispersal", *J. Applied Mechanics and Technical Physics*, 31, No. 5, 708-713 (1990).
47. P.N. Gospodinov, VI. M. Roussinov, S.P. Radev and A.L. Yarin. "Drawing of glass microcapillaries: theory and experiment", *J. Engineering Physics and Thermophysics*, v. 63, No. 6, 1228 (1992).

#### **Papers in professional journals published only in Russian**

1. K.E. Dzhaugashtin, M.T. Murzabayev and A.L. Yarin, "Propagation of a sprinkler jet under the action of lateral wind", *Proceeding of Academy of Sciences of Kazakhstan, Physics and Mathematics*, No. 1(134), 67-71 (1987).

2. K.E. Dzhaugashtin, A.Zh. Naimanova and A.L. Yarin, "Planar laminar jet of conductive liquid in a lateral magnetic field", *Magnetic Hydrodynamics*, No. 2, 142-145 (1987).
3. V.M. Entov, A.N. Rozhkov, V.I. Kordonskii, V.E. Ivanov, I.V. Prokhorov, A.L. Yarin and K.I. Shchekinova, "Uniaxial elongation of polymer solutions of moderate concentration", *Proceedings of Belorussian Academy of Sciences, Physics and Energetics*, No. 1, 72-77, 1989.

### **Preprints (Miscellaneous Publications)**

1. V.M. Entov and A.L. Yarin, "Dynamics of Liquid Jets". Institute for Problems in Mechanics, USSR Acad. Sci., No. 127, Moscow, 1979, 64 pp.
2. V.M. Entov, V.I. Kordonskii, V.A. Kuz'min, Z.P. Shul'man and A.L. Yarin, "A Study of Break-up of the Jets of Rheologically Complex Liquids". Institute of Heat and Mass Transfer, Belorussian Acad. Sci., No. 2, Minsk, 1980, 36 pp.
3. V.M. Entov, V.I. Kordonskii, I.V. Prokhorov, A.N. Rozhkov, A.I. Toropov, Z.P. Shul'man and A.L. Yarin, "On Strong Uniaxial Elongation of Polymer Solutions of Moderate Concentration". Institute of Heat and Mass Transfer Belorussian Acad. Sci., No. 7, Minsk, 1987, 45 pp.
4. V.M. Entov, Fam Khyu Ty and A.L. Yarin, "On the Equations of the Off-shore Pipeline", VINITI N1364-B 87, Moscow, 1987, 69 pp.
5. A.L. Yarin, "Rheology of Polymer Solutions and Melts", Institute for Problems in Mechanics, Acad. Sci. USSR, No. 288, Moscow, 1987, 66 pp.
6. T.M. Getmanyuk, A.L. Yarin, A.S. Spasskii and V.G. Kulichikhin, "Dynamics of Polymeric Jet in Man-made Fibre Spinning", NIITEKHIM, Moscow, 1988, 51 pp.
7. A.L. Yarin, "Mechanical Aspects of the Technologies Directed to Fabrication of Coatings and Fibres from the High-temperature Superconductors", Institute for Problems in Mechanics Acad. Sci. USSR, No. 399, Moscow, 1989, 55 pp.

### **Papers published in proceedings of professional conferences.**

1. K.E. Dzhaugashtin, Z.B. Sakipov and A.L. Yarin, "The diffusional combustion of non-premixed gases in the coflowing air stream", *Proceedings of the 6th All-Union Symposium on Combustion and Explosion*, Alma-Ata, pp. 51-54, 1980.
2. K.E. Dzhaugashtin and A.L. Yarin, "Aerodynamics of a coaxial torch", *Proceedings of the All-Union Conference on "Theory and Applications of Gas Combustion"*, Bukhara, pp. 11-15, 1981.

3. K.E. Dzhaugashtin and A.L. Yarin, "Some results of numerical simulation of an axisymmetric turbulent jet", *Proceedings of the 4th All-Union Scientific Meeting on Theoretical and Applied Aspects of Turbulent Flows*, Tallinn, part 2, pp. 22-26, 1982.
4. A.L. Yarin, "The study of the dynamics of melt spinning", *Proceedings of All-Union Scientific Conference on "Jet Flows of Liquid and Gas"*, Novopolotsk, part 3, pp. 41-47, 1982.
5. K.E. Dzhaugashtin, M.T. Murzabayev and A.L. Yarin, "Vertical turbulent jet with dispersed admixture", *Proceedings of the 5th All-Union Scientific Meeting on Theoretical and Applied Aspects of Turbulent Flows*, Tallinn, part 2, pp. 105-109, 1985.
6. A.V. Bazilevsky, V.M. Entov, A.N. Rozhkov and A.L. Yarin, "Strong flows of polymer solutions: theory and experiment", *Proceedings of the 18th Symp. on Adv. Probl. and Meth. Fluid Mech.* Warsaw, pp. 147-148, 1987.
7. T.L. Nudlina and A.L. Yarin, "Aerodynamics of a torch generating soot particles", *Proceeding of the 6th All-Union Scientific Meeting on Theoretical and applied aspects of turbulent flows*, Tallinn, part 2, pp. 220 - 222, 1989.
8. V.M. Entov and A.L. Yarin, "Hydrodynamic problems of fibre spinning and film forming", *Abstracts of the 5th Annual Meeting of the Polymer Processing Society*, Kyoto, p. 116, 1989.
9. V.V. Grigoryants, G.A. Ivanov, Yu. K. Chamorovskii and A. L. Yarin, "Forming of high birefringent single-mode fibre", *Abstracts of the Joint USSR-USA workshop "Electrooptics"*, Moscow, pp. 8-9, 1989.
10. V. M. Entov and A.L. Yarin, "On the theory of the process of forming of preforms for drawing double-layer glass fibres with the prescribed configuration of the core cross section", *Proceedings of the 5th National Symposium on "Optical Fibres and Their Applications"*, v. 3, Warsaw, pp. 80-98, 1989; also in *Proceedings of the SPIE - The International Society for Optical Engineering*, v. 1085, pp. 42-48.
11. S. Radev, B. Tchavdarov and A.L. Yarin, "Spectral problems of the theory of thin liquid jets and films: buckling of jets impinging upon a wall". *Proceedings of the 6th National Congress on Theoretical and Applied Mechanics*, Bulgaria , Varna, 1989, pp. 322-325.
12. A.L. Yarin, "The structure of concentrated polymer solutions and melts and the rheological behavior of elastoviscous liquids in the technological processes" In: *"Hydromechanics and Heat and Mass Transfer in the Processes of New Materials Design"*, (Lectures presented at the 6th All-Union Congress on Theoretical and Applied Mechanics), Moscow, pp. 212-223, 1990.
13. A. L. Yarin, "Mechanical degradation of macromolecules in flows of polymeric liquid". *Abstracts of the 6th Annual Meeting of the Polymer Processing Society*, Nice, 1990.

14. A.L. Yarin, B. Tchavdarov and S. Radev, "Eigenvalue problems in the theory of thin jets buckling", Proceedings of the 1st ISAIF, Beijing '90, pp. 298-304, World Publishing Corporation, 1990.
15. A.V. Bazilevsky, V.M. Entov, A.N. Rozhkov and A.L. Yarin, "Polymeric jets beads-on-string breakup and related phenomena". Processing of the Golden Jubilee Meeting of the British Society of Rheology and Third European Rheology Conference, Edinburgh, U.K., 44-46, 1990.
16. B.M. Tchavdarov, S.P. Radev and A.L. Yarin, "Quasi-one-dimensional analysis of jet buckling", Proceedings of Twentieth Spring Conference of the Union of Bulgarian Mathematicians. pp. 71-79, Varna, 1991.
17. B. Tchavdarov, S. Radev and A. Yarin, "Numerical analysis of high-viscosity jet buckling". Proceedings of the Sixth European Conference on Mathematics in Industry, Limerick 1991; B.G. Teubner, Stuttgart, pp. 279-282, 1992.
18. R. Rakadjiev and A. Yarin, "Numerical simulation of the tubular film blowing process", Proceedings of the International Conference of Technological Processes for Materials Production, Sofia, 1991.
19. E. Moses, A. Yarin and P. Bar-Yoseph, "On the prediction of knocking in spark ignition engines", Proceedings of the 24th Israel Conference on Mechanical Engineering, Haifa, pp. 1-3, 1992.
20. A.L. Yarin, "Thermophoretic deposition of fine particles from longitudinal flow over a cylinder", Proceedings of the 25th Israel Conference on Mechanical Engineering, Haifa, p. 75, 1994.
21. E. Moses, A. Yarin and P. Bar-Yoseph, "Computer modeling of blended fuel operation of spark-ignition engines", Proceedings of the 25th Israel Conference on Mechanical Engineering, Haifa, p. 274-276, 1994.
22. A.L. Yarin, M.B. Rubin and I.V. Roisman, "Normal and oblique penetration of a rigid projectile into an elastic-plastic target", Proceedings of the 15th Intern. Sympos. on Ballistics, Jerusalem, 1995, v. 1, pp. 83-90.
23. J. Keller, M. Pfaffenlehner, E. Ryssel, C. Tropea, A.L. Yarin and N. Daidzic, "Aerodynamic-acoustic levitator for high Reynolds number applications", Proceedings of 1st World Congress on Ultrasonics, Berlin '95, September 3 to 7, Berlin, Germany, 1995.
24. A.Yu. Gelfgat, P.Z. Bar-Yoseph and A.L. Yarin, "Oscillatory instability of buoyancy convection in long horizontal cavities", Proceedings of the 26th Israel Conference on Mechanical Engineering, Haifa, p. 45-47. 1996.



25. A. Yarin, E. Litovsky, R. Semiat, M. Gandelsman, J. Lifshitz, M. Shapiro and A. Shavit, "Mechanical properties of concentrated ceramic suspensions at high strain rates". Proceeding of the 26th Israel Conference on Mechanical Engineering, Haifa, p. 371-373, 1996.
26. I.V. Roisman, A.L. Yarin and M.B. Rubin, "Oblique penetration of rigid projectiles and normal penetration of deformable/eroding projectiles into elastic-plastic targets", Proceedings of the 26th Israel Conference on Mechanical Engineering, Haifa, p. 483-485, 1996.
27. A.Yu. Gelfgat, P.Z. Bar-Yoseph and A.L. Yarin, "Numerical investigation of Hopf bifurcation corresponding to transition from steady to oscillatory state in a confined convective flow", Proceedings of the ASME Fluids Engineering Division Summer Meeting - 1996, v. 2, pp. 369-374, 1996.
28. G. Brenn, D. Rensink, C. Tropea and A. Yarin, "Investigation of droplet drying characteristics using an acoustic-aerodynamic levitator", Proceedings of the 7th International Conference on Liquid Atomization and Spray Systems (ICLASS), Seoul (Korea), August 18 - 22, pp. 780-787, 1997.
29. A.L. Yarin and D.A. Weiss, "Acoustically levitated drops: resonant drop break-up triggered by ultrasound modulation", Conference "Applications of Power Ultrasound in Physical and Chemical Processing", organized by the "Ecole Nationale Supérieure d'Ingénieurs de Génie Chimique" of the "Institut Nationale Polytechnique de Toulouse, Toulouse (France), 18-19 Nov., 1997, pp. 67-72.
30. A.Yu. Gelfgat, P.Z. Bar-Yoseph and A.L. Yarin, "Patterns of bifurcating convective flows in long horizontal cavities", CHT'97: Advances in Computational Heat Transfer. Proc. of a Symposium in Cesme, Turkey, 26-30 May, pp. 403-410 (1997).
31. A.Yu. Gelfgat, P.Z. Bar-Yoseph and A.L. Yarin, "Multiplicity and stability of steady convective flows in laterally heated cavities", Proc. of 11th Heat Transfer Conf., Kyongju, Korea, v. 3, p. 435-440 (1998).
32. A.L. Yarin and D.A. Weiss, "Acoustically levitated drops: Ultrasound modulation and drop dynamics on and off resonance", Third Intern. Conf. on Multi-Phase Flow, Lyon, France, (1998), sec. 571, 1 - 8.
33. A.Yu. Gelfgat, P.Z. Bar-Yoseph and A.L. Yarin, "Numerical investigation of bifurcating convective flows in long horizontal cavities", Proc. of the 27<sup>th</sup> Israel conference on Mechanical Engineering, Haifa, p. 133 - 135 (1998).
34. Gelfgat AY; Bar-Yoseph PZ; Yarin A.L. Multiplicity and stability of steady convective flows in laterally heated cavities. 11th International Heat Transfer Conference, KYONGJU, SOUTH KOREA, AUG 23-28, 1998; HEAT TRANSFER 1998, VOL 3: GENERAL PAPERS Pages: 435-440 Published: 1998.

35. A.L. Yarin, "Acoustic levitation of droplets - A new technological and research tool", Proc. of the 27<sup>th</sup> Israel Conference on Mechanical Engineering, Haifa, p. 287 (1998).
36. D. Shavit and A.L. Yarin, "The first eigenfrequency of rotating rigid rotor in electric motor", Proc. of the 28<sup>th</sup> Israel Conference on Mechanical Engineering, Beer-Sheva, 2000.
37. O. Kastner, G. Brenn, D. Rensink, C. Tropea, and A.L. Yarin, "Investigation of the drying behavior of suspension droplets in an acoustic tube levitator", 16<sup>th</sup> Annual Conference on Liquid Atomization and Spray Systems. 11<sup>th</sup> - 13<sup>th</sup> Sept. 2000, Darmstadt, pp. VIII 1.1-1.6, 2000.
37. G. Brenn, and A. L. Yarin, "Diffusive mass transfer from free and pendant drops", 17<sup>th</sup> Annual Conference on Liquid Atomization and Spray Systems. 2<sup>nd</sup>-6<sup>th</sup> Sept. 2001, Zürich, 2001.
38. Theron A; Zussman E; Yarin A.L. Electrostatic field-assisted alignment of electrospun nanofibres. 8th Foresight Conference on Molecular Nanotechnology. Location: BETHESDA, MARYLAND. NOV 03-05, 2000. Source: NANOTECHNOLOGY Volume: 12 Issue: 3 Pages: 384-390. Published: SEP 2001.
39. A. Yu. Gelfgat, A. L. Yarin, and P. Z. Bar-Yoseph, "Stability of a two-layered Dean flow with capillary liquid-liquid interface", Proceedings of the 12<sup>th</sup> International Couette-Taylor Workshop, September 6-8, Evanston, IL, USA, 2001.
40. E. Zussman, A. Theron and A.L. Yarin. Assembly of electrospun nanofibers into crossbars. Proceedings 2002 2<sup>nd</sup> IEEE Conference on Nanotechnology. Washington DC, August 26-28, 2002, pp. 283-286.
41. Zussman E; Theron A; Yarin A.L. Assembly of electrospun nanofibers into crossbars. 2nd IEEE Conference on Nanotechnology Location: WASHINGTON, DC Date: AUG 26-28, 2002. PROCEEDINGS OF THE 2002 2ND IEEE CONFERENCE ON NANOTECHNOLOGY Pages: 283-286. Published: 2002
42. Xu H; Yarin A.L.; Reneker D.H. Characterization of fluid flow in jets during electrospinning. 226th National Meeting of the American-Chemical-Society. NEW YORK, NEW YORK, SEP 07-11, 2003. Source: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY Volume: 226 Pages: U424-U424 Part: Part 2 Meeting Abstract: 456-POLY Published: SEP 2003.
43. A. Theron, E. Zussman, A.L. Yarin, "Measurements of the governing parameters in the electrospinning of polymer solutions," *Proc. of the 226th ACS Meeting*, 44, 2, 61-62 U424-U425, New York City, 2003.
44. TA Kowalewski, AL Yarin, S Blonski. Nanofibers by electro-spinning of polymer solutions. The 5th Euromech Fluid Mechanics Conference, Toulouse, France, 2003.

45. Y. Cohen, Y. Dror, R.L. Khalfin, W. Salalha, A.L. Yarin, E. Zussman, "Carbon Nanotubes Embedded in Oriented Polymer Nanofibers by Electrospinning," Proc. of the Annual APS March Meeting, Montreal, Canada, 2004.
46. Y. Dror, W. Salalha, R.L. Khalfin, Y. Cohen, A.L. Yarin, E. Zussman, R. Yerushalmi-Rozen, W. Pyckhout-Hintzen, "Characterization and Processing of Single-Walled Carbon Nanotubes Dispersions." Proc. of the NT'04 International Conference on the Science and Application of Nanotubes, San Luis Potosi, Mexico, 2004.
47. O. Yarden, E. Zussman, A.L. Yarin, "Developing a nanofiber-based platform for application of antifungal compounds," Proc. of the Annual Meeting of the Israeli Society of Microbiology, Haifa, Israel, 2005.
48. E. Zussman, and A.L. Yarin, "Co-electrospinning of polymer nanofibers," *Proc. of the VW Fund Conference on Complex Materials*, Stuttgart, Germany, 2005.
49. Y. Cohen, Y. Dror, W. Salalha, (S) A.L. Yarin, E. Zussman, and W. Pyckhout-Hintzen, "From Carbon Nanotube Dispersion to Composite Nanofibers," *Proc. of the Annual APS March Meeting*, Los Angeles, CA, 2005.
50. B Rovagnati, AL Yarin, F Mashayek. Modeling of chemical reactions for plasma coating of nanoparticles. Proc. of 17th Intl. Symp. on Plasma Chemistry, ISPC17, p. 6, 2005.
51. B Rovagnati, F Mashayek, AL Yarin, T Matsoukas. Particle coating low-pressure Ch/sub 4/H/sub 2/plasma: The effect of particle size. Plasma Science, 2006. ICOPS 2006 (The 33rd IEEE International Conference). P. 246.
52. T. Han, D.H. Reneker, A.L. Yarin. Buckling of jets in electrospinning. Proceedings of the 2007 Conference on Advanced Fibers and Polymer Materials. Vv. 1-2, pp. 5-5 Oct. 15-17, 2007, Shanghai, China.
53. E. Zussman, A.L. Yarin, J.H. Wendorff, and A. Griener, "Co-electrospinning of polymer and functional materials," *Proc. of the 3rd Int. Symposium on Complex Materials*, Kerkrade, The Netherlands, 2007.
54. Srikar R.; Megaridis C. M.; Yarin A.L. Desorption-Limited Mechanism of Release from Polymer Nanofibers. ASME International Manufacturing Science and Engineering Conference. Evanston, IL. OCT 07-10, 2008. MSEC 2008: PROCEEDINGS OF THE ASME INTERNATIONAL MANUFACTURING SCIENCE AND ENGINEERING CONFERENCE 2008, VOL 2 Pages: 465-474 Published: 2009.
55. Tiwari Manish K.; Megaridis Constantine M.; Yarin Alexander L. ELECTROSPUN NANOCOMPOSITES AS FLEXIBLE SENSORS. ASME International Manufacturing



7) United States Patent 8,108,157. G.G. Chase, A. Yarin, M.K. Tiwari, C.M. Megaridis [Electrospun fibrous nanocomposites as permeable, flexible strain sensors](#).

8) WO 2010/141482 A2 (WO Patent 2,010,141,482). International Patent Application Publication: A. Yarin, S. Raman, T. Gambaryan-Roisman. Nanofiber covered micro components and method for micro component cooling.

9) US Patent App. 13/273,719. A. Yarin, S. Raman, T. Gambaryan-Roisman, S. Sinha-Ray, Y. Zhang. Nanofiber covered micro components and method for micro component cooling, 2011.

10) WO/2013/055003 (Publication number). International patent: M.W. Lee, S.S. Yoon, A.L. Yarin, S. Sinha-Ray, B. Pourdeyhimi. Electrospinning device. <http://patentscope.wipo.int/search/en/WO2013055003>.