

Peer-reviewed Articles (Ryuichi Okamoto)

- [1] R. Okamoto and K. Koga. “*Theory of Gas Solubility and Hydrophobic Interaction in Aqueous Electrolyte Solutions.*” J. Phys. Chem. B, **125**(46):12820–12831, Nov. 25, 2021. DOI: [10.1021/acs.jpccb.1c08050](https://doi.org/10.1021/acs.jpccb.1c08050).
- [2] H. Katsuto, R. Okamoto, T. Sumi, and K. Koga. “*Ion Size Dependences of the Salting-Out Effect: Reversed Order of Sodium and Lithium Ions.*” J. Phys. Chem. B, **125**(23):6296–6305, June 17, 2021. DOI: [10.1021/acs.jpccb.1c03388](https://doi.org/10.1021/acs.jpccb.1c03388).
- [3] R. Okamoto, K. Koga, and A. Onuki. “*Theory of electrolytes including steric, attractive, and hydration interactions.*” J. Chem. Phys., **153**(7):074503, Aug. 21, 2020. DOI: [10.1063/5.0015446](https://doi.org/10.1063/5.0015446).
- [4] K. Yasuda, R. Okamoto, and S. Komura. “*A three-sphere microswimmer in a structured fluid.*” EPL, **123**(3):34002, Aug. 28, 2018. DOI: [10.1209/0295-5075/123/34002](https://doi.org/10.1209/0295-5075/123/34002).
- [5] R. Okamoto and A. Onuki. “*Theory of nonionic hydrophobic solutes in mixture solvent: Solvent-mediated interaction and solute-induced phase separation.*” J. Chem. Phys., **149**(1):014501, July 3, 2018. DOI: [10.1063/1.5037673](https://doi.org/10.1063/1.5037673).
- [6] K. Yasuda, R. Okamoto, S. Komura, and J.-B. Fournier. “*Dynamics of a bilayer membrane with membrane-solvent partial slip boundary conditions.*” Soft Materials, **16**(3):186–191, July 3, 2018. DOI: [10.1080/1539445X.2018.1462830](https://doi.org/10.1080/1539445X.2018.1462830).
- [7] T. V. Sachin Krishnan, K. Yasuda, R. Okamoto, and S. Komura. “*Thermal and active fluctuations of a compressible bilayer vesicle.*” J. Phys.: Condens. Matter, **30**(17):175101, May 2, 2018. DOI: [10.1088/1361-648X/aab6c7](https://doi.org/10.1088/1361-648X/aab6c7).
- [8] Y. Hosaka, K. Yasuda, I. Sou, R. Okamoto, and S. Komura. “*Thermally Driven Elastic Micromachines.*” J. Phys. Soc. Jpn., **86**(11):113801, Nov. 15, 2017. DOI: [10.7566/JPSJ.86.113801](https://doi.org/10.7566/JPSJ.86.113801).
- [9] I. Sou, R. Okamoto, S. Komura, and J. Wolff. “*Coexistences of lamellar phases in ternary surfactant solutions.*” Soft Materials, **15**(4):272–281, Oct. 2, 2017. DOI: [10.1080/1539445X.2017.1354024](https://doi.org/10.1080/1539445X.2017.1354024).
- [10] K. Yasuda, Y. Hosaka, M. Kuroda, R. Okamoto, and S. Komura. “*Elastic Three-Sphere Microswimmer in a Viscous Fluid.*” J. Phys. Soc. Jpn., **86**(9):093801, Sept. 15, 2017. DOI: [10.7566/JPSJ.86.093801](https://doi.org/10.7566/JPSJ.86.093801).
- [11] R. Okamoto, S. Komura, and J.-B. Fournier. “*Dynamics of a bilayer membrane coupled to a two-dimensional cytoskeleton: Scale transfers of membrane deformations.*” Phys. Rev. E, **96**(1):012416, July 31, 2017. DOI: [10.1103/PhysRevE.96.012416](https://doi.org/10.1103/PhysRevE.96.012416).

- [12] Y. Hosaka, K. Yasuda, R. Okamoto, and S. Komura. “*Lateral diffusion induced by active proteins in a biomembrane.*” Phys. Rev. E, **95**(5):052407, May 16, 2017. DOI: [10.1103/PhysRevE.95.052407](https://doi.org/10.1103/PhysRevE.95.052407).
- [13] K. Yasuda, R. Okamoto, and S. Komura. “*Swimmer-Microrheology.*” J. Phys. Soc. Jpn., **86**(4):043801, Apr. 15, 2017. DOI: [10.7566/JPSJ.86.043801](https://doi.org/10.7566/JPSJ.86.043801).
- [14] K. Yasuda, R. Okamoto, and S. Komura. “*Anomalous diffusion in viscoelastic media with active force dipoles.*” Phys. Rev. E, **95**(3):032417, Mar. 27, 2017. DOI: [10.1103/PhysRevE.95.032417](https://doi.org/10.1103/PhysRevE.95.032417).
- [15] K. Yasuda, R. Okamoto, S. Komura, and A. S. Mikhailov. “*Localization and diffusion of tracer particles in viscoelastic media with active force dipoles.*” EPL, **117**(3):38001, Feb. 1, 2017. DOI: [10.1209/0295-5075/117/38001](https://doi.org/10.1209/0295-5075/117/38001).
- [16] T. V. Sachin Krishnan, R. Okamoto, and S. Komura. “*Relaxation dynamics of a compressible bilayer vesicle containing highly viscous fluid.*” Phys. Rev. E, **94**(6):062414, Dec. 30, 2016. DOI: [10.1103/PhysRevE.94.062414](https://doi.org/10.1103/PhysRevE.94.062414).
- [17] R. Okamoto and A. Onuki. “*Ionization at a solid-water interface in an applied electric field: Charge regulation.*” J. Chem. Phys., **145**(12):124706, Sept. 28, 2016. DOI: [10.1063/1.4963100](https://doi.org/10.1063/1.4963100).
- [18] K. Yasuda, S. Komura, and R. Okamoto. “*Dynamics of a membrane interacting with an active wall.*” Phys. Rev. E, **93**(5):052407, May 13, 2016. DOI: [10.1103/PhysRevE.93.052407](https://doi.org/10.1103/PhysRevE.93.052407).
- [19] R. Okamoto, Y. Kanemori, S. Komura, and J.-B. Fournier. “*Relaxation dynamics of two-component fluid bilayer membranes.*” Eur. Phys. J. E, **39**(5):52, May 6, 2016. DOI: [10.1140/epje/i2016-16052-3](https://doi.org/10.1140/epje/i2016-16052-3).
- [20] R. Okamoto and A. Onuki. “*Density functional theory of gas-liquid phase separation in dilute binary mixtures.*” J. Phys.: Condens. Matter, **28**(24):244012, Apr. 26, 2016. DOI: [10.1088/0953-8984/28/24/244012](https://doi.org/10.1088/0953-8984/28/24/244012).
- [21] R. Okamoto, N. Shimokawa, and S. Komura. “*Nano-domain formation in charged membranes: Beyond the Debye-Hückel approximation.*” EPL, **114**(2):28002, Apr. 1, 2016. DOI: [10.1209/0295-5075/114/28002](https://doi.org/10.1209/0295-5075/114/28002).
- [22] A. Onuki, S. Yabunaka, T. Araki, and R. Okamoto. “*Structure formation due to antagonistic salts.*” Curr. Opin. Coll. Int. Sci., **22**:59–64, Mar. 4, 2016. DOI: [10.1016/j.cocis.2016.02.007](https://doi.org/10.1016/j.cocis.2016.02.007).

- [23] S. Komura, K. Yasuda, and R. Okamoto. “*Dynamics of two-component membranes surrounded by viscoelastic media.*” *J. Phys.: Condens. Matter*, **27**(43):432001, Nov. 4, 2015. DOI: [10.1088/0953-8984/27/43/432001](https://doi.org/10.1088/0953-8984/27/43/432001).
- [24] R. Okamoto and A. Onuki. “*Bubble formation in water with addition of a hydrophobic solute.*” *Eur. Phys. J. E*, **38**(7):72, July 7, 2015. DOI: [10.1140/epje/i2015-15072-9](https://doi.org/10.1140/epje/i2015-15072-9).
- [25] S. Yabunaka, R. Okamoto, and A. Onuki. “*Hydrodynamics in bridging and aggregation of two colloidal particles in a near-critical binary mixture.*” *Soft Matter*, **11**(28):5738–5747, June 18, 2015. DOI: [10.1039/C4SM02853H](https://doi.org/10.1039/C4SM02853H).
- [26] R. Okamoto and A. Onuki. “*Attractive interaction and bridging transition between neutral colloidal particles due to preferential adsorption in a near-critical binary mixture.*” *Phys. Rev. E*, **88**(2):022309, Aug. 19, 2013. DOI: [10.1103/PhysRevE.88.022309](https://doi.org/10.1103/PhysRevE.88.022309).
- [27] R. Okamoto, Y. Fujitani, and S. Komura. “*Drag Coefficient of a Rigid Spherical Particle in a Near-Critical Binary Fluid Mixture.*” *J. Phys. Soc. Jpn.*, **82**(8):084003, Aug. 15, 2013. DOI: [10.7566/JPSJ.82.084003](https://doi.org/10.7566/JPSJ.82.084003).
- [28] S. Yabunaka, R. Okamoto, and A. Onuki. “*Phase separation in a binary mixture confined between symmetric parallel plates: Capillary condensation transition near the bulk critical point.*” *Phys. Rev. E*, **87**(3):032405, Mar. 19, 2013. DOI: [10.1103/PhysRevE.87.032405](https://doi.org/10.1103/PhysRevE.87.032405).
- [29] R. Okamoto and A. Onuki. “*Casimir amplitudes and capillary condensation of near-critical fluids between parallel plates: Renormalized local functional theory.*” *J. Chem. Phys.*, **136**(11):114704, Mar. 15, 2012. DOI: [10.1063/1.3693331](https://doi.org/10.1063/1.3693331).
- [30] R. Okamoto and A. Onuki. “*Charged colloids in an aqueous mixture with a salt.*” *Phys. Rev. E*, **84**(5):051401, Nov. 2, 2011. DOI: [10.1103/PhysRevE.84.051401](https://doi.org/10.1103/PhysRevE.84.051401).
- [31] A. Onuki, T. Araki, and R. Okamoto. “*Solvation effects in phase transitions in soft matter.*” *J. Phys.: Condens. Matter*, **23**(28):284113, June 27, 2011. DOI: [10.1088/0953-8984/23/28/284113](https://doi.org/10.1088/0953-8984/23/28/284113).
- [32] A. Onuki, R. Okamoto, and T. Araki. “*Phase transitions in soft matter induced by selective solvation.*” *Bull. Chem. Soc. Jpn.*, **84**(6):569–587, June 4, 2011. DOI: [10.1246/bcsj.20110012](https://doi.org/10.1246/bcsj.20110012).
- [33] A. Onuki and R. Okamoto. “*Selective solvation effects in phase separation in aqueous mixtures.*” *Curr. Opin. Coll. Int. Sci.*, **16**(6):525–533, Apr. 21, 2011. DOI: [10.1016/j.cocis.2011.04.002](https://doi.org/10.1016/j.cocis.2011.04.002).

- [34] R. Okamoto and A. Onuki. “*Precipitation in aqueous mixtures with addition of a strongly hydrophilic or hydrophobic solute.*” Phys. Rev. E, **82**(5):051501, Nov. 18, 2010. DOI: [10.1103/PhysRevE.82.051501](https://doi.org/10.1103/PhysRevE.82.051501).
- [35] R. Okamoto and A. Onuki. “*Ion distribution around a charged rod in one and two component solvents: preferential solvation and first order ionization phase transition.*” J. Chem. Phys., **131**(9):09B605, Sept. 2, 2009. DOI: [10.1063/1.3216518](https://doi.org/10.1063/1.3216518).
- [36] A. Onuki and R. Okamoto. “*Solvation and dissociation in weakly ionized polyelectrolytes.*” J. Phys. Chem. B, **113**(12):3988–3996, Feb. 18, 2009. DOI: [10.1021/jp809813r](https://doi.org/10.1021/jp809813r).
- [37] R. Okamoto, Y. Uno, and Y. Fujitani. “*Self-Diffusion in a Lattice via the Interstitialcy Mechanism.*” J. Phys. Soc. Jpn., **76**(2):024603, Feb. 15, 2007. DOI: [10.1143/JPSJ.76.024603](https://doi.org/10.1143/JPSJ.76.024603).
- [38] R. Okamoto and Y. Fujitani. “*Group-Theoretical Calculation of the Diffusion Coefficient via the Vacancy-Assisted Mechanism.*” J. Phys. Soc. Jpn., **74**(9):2510–2516, Sept. 15, 2005. DOI: [10.1143/JPSJ.74.2510](https://doi.org/10.1143/JPSJ.74.2510).