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## 2023

### **Numerical Studies on the Controlled Thermocapillary Migration of a Sessile Droplet.**

Wang J-X, Zhang F-Y, Li S-Y, Cheng Y-P, Yan W-C, Wang F, Xu J-L and Sui Y. *Industrial & Engineering Chemistry Research* vol. 62, (44) 18792-18799. *American Chemical Society (Acs)*.

### **A three-dimensional level set method for droplet sorting using a non-uniform electric field.**

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### **CoreShell-Structured Electrorheological Fluid with a Polarizability-Tunable Nanocarbon Shell for Enhanced Stimuli-Responsive Activity.**

Chen S, Cheng Y, Zhao Z, Zhang K, Hao T, Sui Y, Wang W, Zhao J and Li Y. *Acs Applied Materials & Interfaces* vol. 15, (29) 35741-35749. *American Chemical Society (Acs)*.

### **Transient deformation of a viscoelastic capsule in a cross-slot microchannel: effects of inertia and membrane viscosity.**

Lu RX, Guo ZY, Yu P and Sui Y. *Journal of Fluid Mechanics* vol. 962,. *Cambridge University Press (Cup)*.

### **A method for real-time mechanical characterisation of microcapsules.**

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### **A computational model for the transit of a cancer cell through a constricted microchannel.**

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### **Acoustically accelerated neural differentiation of human embryonic stem cells.**

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### **Characterising Mechanical Properties of Flowing Microcapsules Using a Deep Convolutional Neural Network.**

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### **Numerical and theoretical analysis of fast evaporating sessile droplets with coupled fields.**

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## 2021

### **Rapid droplet spreading on a hot substrate.**

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### **Path selection of a train of spherical capsules in a branched microchannel.**

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**Numerical studies on the hydraulic and thermal performances of trapezoidal microchannel heat sink.**

Song J, Liu F, Sui Y and Jing D. *International Journal of Thermal Sciences* vol. 161,.Elsevier.

**A high-throughput method to characterize membrane viscosity of flowing microcapsules.**

Lin T, Wang Z, Lu R, Wang W and Sui Y. *Physics of Fluids* vol. 33, (1).Aip Publishing.

**A neural network-based algorithm for high-throughput characterisation of viscoelastic properties of flowing microcapsules.**

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## 2020

**Numerical analysis of bubble bursting at the liquid surface by wave propagation.**

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**Theoretical Analysis of a Sessile Evaporating Droplet on a Curved Substrate with an Interfacial Cooling Effect.**

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**Electrically induced droplet ejection dynamics under shear flow.**

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JING D, SONG J and SUI Y. *Fractals* vol. 28, (02).World Scientific Publishing.

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**Path Selection of a Spherical Capsule in a Branched Channel.**

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**Computational Methods and Models in Circulatory and Reproductive Systems.**

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**Dynamics of a non-spherical capsule in general flow.**

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**Swimming performance and vorticity structures of a mother-calf pair of fish.**

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**Numerical investigation of coalescence-induced droplet jumping on superhydrophobic surfaces for efficient dropwise condensation heat transfer.**

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**Numerical Simulations of Deformation and Aggregation of Red Blood Cells in Shear Flow.**

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**An efficient computational model for macroscale simulations of moving contact lines.**

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**Fluid flow and heat transfer in wavy microchannels.**

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**A front-tracking lattice Boltzmann method to study flow-induced deformation of three-dimensional capsules.**

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**Numerical simulation of capsule deformation in simple shear flow.**

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**The transient deformation of red blood cells in shear flow.**

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**Implementation of CLEARER algorithm on three-dimensional nonorthogonal curvilinear coordinates and its application.**

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