

# Publications intéressantes

## Dans Journal of Chemical Education

### 2019

- [Helping Students Connect Interdisciplinary Concepts and Skills in Physical Chemistry and Introductory Computing: Solving Schrödinger's Equation for the Hydrogen Atom](#) Oka Kurniawan, Li Ling Apple Koh, Jermaine Zhi Min Cheng, Maggie Pee, J. Chem. Educ. 2019, 96(10), 2202-2207 DOI: 10.1021/acs.jchemed.9b00068
- [Teaching Entropy from Phase Space Perspective: Connecting the Statistical and Thermodynamic Views Using a Simple One-Dimensional Model](#) Dhritiman Bhattacharyya, Jahan M. Dawlaty, J. Chem. Educ. 2019, 96(10), 2208-2216 DOI: 10.1021/acs.jchemed.9b00134
- [Demystifying Mathematical Modeling of Electrochemical Systems](#) Lisa I. Stephens, Janine Mauzeroll, J. Chem. Educ. 2019, 96(10), 2217-2224 DOI: 10.1021/acs.jchemed.9b00542
- [Development of the Enthalpy and Entropy in Dissolution and Precipitation Inventory](#) Timothy N. Abell, Stacey Lowery Bretz, J. Chem. Educ. 2019, 96(9), 1804-1812, DOI: 10.1021/acs.jchemed.9b00186
- [Investigating Student Understanding of London Dispersion Forces: A Longitudinal Study](#) Keenan Noyes, Melanie M. Cooper, J. Chem. Educ. 2019, 96(9), 1821-1832 DOI: 10.1021/acs.jchemed.9b00455
- [Bouncing Droplets: A Hands-On Activity To Demonstrate the Properties and Applications of Superhydrophobic Surface Coatings](#) Carolina Cionti, Tommaso Taroni, Daniela Meroni, J. Chem. Educ. 2019, 96(9), 1971-1976 DOI: 10.1021/acs.jchemed.9b00406
- [Chemical Curiosity on Campus: An Undergraduate Project on the Structure and Wettability of Natural Surfaces](#) Anthony Katselas, Alice Motion, Chiara O'Reilly, Chiara Neto, J. Chem. Educ. 2019, 96(9), 1998-2002 DOI: 10.1021/acs.jchemed.9b00324
- [Alternative Derivation of the Maxwell Distribution of Speeds](#) Francisco Rivadulla, J. Chem. Educ. 2019, 96(9), 2063-2065 DOI: 10.1021/acs.jchemed.9b00188
- [Realistic Implementation of the Particle Model for the Visualization of Nanoparticle Precipitation and Growth](#) Antonella Di Vincenzo, Michele A. Floriano, J. Chem. Educ. 2019, 96(8), 1654-1662 DOI: 10.1021/acs.jchemed.9b00330
- [Implementing New Educational Platforms in the Classroom: An Interactive Approach to the Particle in a Box Problem](#) Vinícius Wilian D. Cruzeiro, Xiang Gao, Valeria D. Kleiman, J. Chem. Educ. 2019, 96(8), 1663-1670 DOI: 10.1021/acs.jchemed.9b00195
- [Development of the Quantization and Probability Representations Inventory as a Measure of Students' Understandings of Particulate and Symbolic Representations of Electron Structure](#) Zahilyn D. Roche Allred, Stacey Lowery Bretz, J. Chem. Educ. 2019, 96(8), 1558-1570 DOI: 10.1021/acs.jchemed.9b00098
- [Developing and Using a Computer Simulation of Liquid-Vapor Transitions to Improve Students' Assimilation of Concepts Related to the Behavior of Real Gases](#) David Zorrilla, Jesús Sánchez-Márquez, Víctor García, Manuel Fernández, J. Chem. Educ. 2019, 96(8), 1646-1653 DOI: 10.1021/acs.jchemed.8b00939
- [Enthalpy and the Second Law of Thermodynamics](#) David Keifer, J. Chem. Educ., 2019, 96 (7), pp 1407-1411 DOI: 10.1021/acs.jchemed.9b00326
- [µdroPi: A Hand-Held Microfluidic Droplet Imager and Analyzer Built on Raspberry Pi](#) Meng Sun, Zhengda LiQiong Yang, J. Chem. Educ., 2019, 96 (6), pp 1152-1156 DOI:

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- [PChem Challenge Game: Reinforcing Learning in Physical Chemistry](#) Tugba G. Kucukkal, Ajda Kahveci, *J. Chem. Educ.*, 2019, 96 (6), pp 1187-1193 DOI: 10.1021/acs.jchemed.8b00757
- [Effect of Chemical and Physical Modifications on the Wettability of Polydimethylsiloxane Surfaces](#) Carolyn L. Wanamaker, Brittany S. Neff, Azieta Nejati-Namin, Erin R. Spatenka, Mong-Lin Yang, *J. Chem. Educ.*, 2019, 96 (6), pp 1212-1217 DOI: 10.1021/acs.jchemed.8b00814
- [Disseminating a Free, Practical Java Tool To Interactively Generate and Edit 2D Chemical Structures](#) Andreas Hofmann, Mark J. Coster, Paul Taylor, *J. Chem. Educ.*, 2019, 96 (6), pp 1262-1267 DOI: 10.1021/acs.jchemed.9b00073
- [Design, Fabrication, and Optical Characterization of a Low-Cost and Open-Source Spin Coater](#) Mohammad Sadegh-cheri, *J. Chem. Educ.*, 2019, 96 (6), pp 1268-1272 DOI: 10.1021/acs.jchemed.9b00013
- [Collaborative Learning Exercises for Teaching Protein Mass Spectrometry](#) Michelle L. Kovarik, Jill K. Robinson, *J. Chem. Educ.* 2019, 96 (5) pp905-911 DOI: 10.1021/acs.jchemed.8b00734 + [<https://community.asdlib.org/activelearningmaterials/biological-mass-spectrometry-proteomics/> | Biological Mass Spectrometry: Proteomics]
- [A Tale of Two Molecules: How the Heat Capacities of N<sub>2</sub>\(g\) and F<sub>2</sub>\(g\) Differ At High Temperature and Why Naïve Expectations Fail to Explain These Differences: A Spreadsheet Exercise for Physical Chemistry Students](#) Arthur M. Halpern and Robert J. Noll, *J. Chem. Educ.*, 2019, 96 (5), pp 926-935 DOI: 10.1021/acs.jchemed.9b00029
- [Creating and Experimenting with a Low-Cost, Rugged System to Visually Demonstrate the Vapor Pressure of Liquids as a Function of Temperature](#) Rodrigo Papai, Mayara Araujo Romano, Aline Rodrigues Arroyo, Bárbara Rodrigues da Silva, Bruno Tresoldi, Gabriela Cabo Winter, Julia Messias Costa, Maria Aparecida Freitas Santos, Matheus Damasceno Prata, and Ivanise Gaubeur, *J. Chem. Educ.*, 2019, 96 (2), pp 335-341 DOI: 10.1021/acs.jchemed.8b00381
- [Teaching Boyle's Law and Charles' Law through Experiments that Use Novel, Inexpensive Equipment Yielding Accurate Results](#) Taweetham Limpanuparb, Siradanai Kanithasevi, Maytouch Lojanarungsiri, and Puh Pakwilaikiat, *J. Chem. Educ.*, 2019, 96 (1), pp 169-174 DOI: 10.1021/acs.jchemed.8b00460
- [Simple and Low-Cost Setup for Measurement of the Density of a Liquid](#) Nima Noei, Iman Mohammadi Imani, Lee D. Wilson, and Saeid Azizian, *J. Chem. Educ.*, 2019, 96 (1), pp 175-179 DOI: 10.1021/acs.jchemed.7b00979
- [Reduction of Water Waste in an Organic Chemistry Laboratory Using a Low-Cost Recirculation System for Condenser Apparatus](#) Alex Schoeddert, Keshwaree Babooram, and Sarah Pelletier *J. Chem. Educ.*, 2019, 96 (1), pp 180-182 DOI: 10.1021/acs.jchemed.8b00400
- [Graphical Representation of Hydrogenic Orbitals: Incorporating Both Radial and Angular Parts of the Wave Function](#) Meghna A. Manae and Anirban Hazra, *J. Chem. Educ.*, 2019, 96 (1), pp 187-190 DOI: 10.1021/acs.jchemed.8b00372

## 2018

- [Wetting Modification by Photocatalysis: A Hands-on Activity To Demonstrate Photoactivated Reactions at Semiconductor Surfaces](#) Luca Rimoldi, Tommaso Taroni, and Daniela Meroni, *J. Chem. Educ.*, 2018, 95 (12), pp 2216-2221 DOI: 10.1021/acs.jchemed.8b00362
- [Constructing the Phase Diagram of a Single-Component System Using Fundamental Principles of Thermodynamics and Statistical Mechanics: A Spreadsheet-Based Learning Experience for Students](#) Arthur M. Halpern and Charles J. Marzocco, *J. Chem. Educ.*, 2018, 95 (12), pp 2197-2204 DOI: 10.1021/acs.jchemed.8b00560
- [Using the Principles of Classical and Statistical Thermodynamics To Calculate the Melting and Boiling Points, Enthalpies and Entropies of Fusion and Vaporization of Water, and the Freezing](#)

[Point Depression and Boiling Point Elevation of Ideal and Nonideal Aqueous Solutions](#) Arthur M. Halpern and Charles J. Marzzacco, *J. Chem. Educ.*, 2018, 95 (12), pp 2205–2211 DOI: 10.1021/acs.jchemed.8b00561

- [The Gibbs Phase Rule: What Happens When Some Phases Lack Some Components?](#) Deepika Janakiraman, *J. Chem. Educ.*, 2018, 95 (11), pp 2086–2088 DOI: 10.1021/acs.jchemed.8b00377
- [Liquid Crystal Demonstration of Binary Phase Behavior for the Classroom](#) Marissa E. Tousley, *J. Chem. Educ.*, 2018, 95 (11), pp 2000–2005 DOI: 10.1021/acs.jchemed.8b00081
- [Approximate Equation To Calculate Partial Pressures in a Mixture of Real Gases](#) Bernard Hayez, *J. Chem. Educ.*, 2018, 95 (11), pp 1982–1988 DOI: 10.1021/acs.jchemed.8b00185
- [Investigation of the Ternary Phase Diagram of Water-Propan-2-ol-Sodium Chloride: A Laboratory Experiment](#) Cory C. Pye, M. Angélique Imperial, Coltin Elson, Megan L. Himmelman, Jacquelyn A. White, and Fuhao Lin, *J. Chem. Educ.*, 2018, 95 (8), pp 1398–1401 DOI: 10.1021/acs.jchemed.8b00242
- [Pedagogical Approach to the Modeling and Simulation of Oscillating Chemical Systems with Modern Software: The Brusselator Model](#) Jaime H. Lozano-Parada, Helen Burnham, and Fiderman Machuca Martinez, *J. Chem. Educ.*, 2018, 95 (5), pp 758–766 DOI: 10.1021/acs.jchemed.7b00703
- [Facilitating Students' Interaction with Real Gas Properties Using a Discovery-Based Approach and Molecular Dynamics Simulations](#) Chelsea Sweet, Oyewumi Akinfenwa, and Jonathan J. Foley, *J. Chem. Educ.*, 2018, 95 (3), pp 384–392 DOI: 10.1021/acs.jchemed.7b00747

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- [Development and Use of an Open-Source, User-Friendly Package To Simulate Voltammetry Experiments](#) Shuo Wang, Jing Wang, and Yanjing Gao, *J. Chem. Educ.*, 2017, 94 (10), pp 1567–1570 DOI: 10.1021/acs.jchemed.6b00986
- [Adapting and Modifying the Apparatus for Students To Accurately Determine the Freezing Point of a Solvent and Solution](#) Shirong Li, Jianzhong Guo, Kewang Wang, Lin Chen, Daodao Hu, and Yunshan Bai, *J. Chem. Educ.*, 2017, 94 (10), pp 1590–1593 DOI: 10.1021/acs.jchemed.7b00253
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- [Partially Miscible Water-Triethylamine Solutions and Their Temperature Dependence](#), Johan P. Erikson, *J. Chem. Educ.*, 2017, 94 (1), pp 75–78 DOI: 10.1021/acs.jchemed.6b00489

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- [From Discrete to Continuous Process Simulation in Classical Thermodynamics: Irreversible Expansions of Ideal Monatomic Gases](#), Carmen Álvarez-Rúa, Javier Borge, *J. Chem. Educ.*, 2016, 93 (12), pp 2110–2116 DOI: 10.1021/acs.jchemed.6b00226
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- [Improving Students' Understanding of the Connections between the Concepts of Real-Gas Mixtures, Gas Ideal-Solutions, and Perfect-Gas Mixtures](#), Romain Privat, Jean-Noël Jaubert, and Edouard Moine, *J. Chem. Educ.*, 2016, 93 (12), pp 2040–2045 DOI: 10.1021/acs.jchemed.6b00553
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- [Assembling and Using a Simple, Low-Cost, Vacuum Filtration Apparatus That Operates without Electricity or Running Water](#) Fengxiu Zhang, Yiwei Hu, Yaling Jia, Yonghua Lu, and Guangxian Zhang, *J. Chem. Educ.*, 2016, 93 (10), pp 1818–1820 DOI: 10.1021/acs.jchemed.5b00997
- [Rethinking Undergraduate Physical Chemistry Curricula](#), Stephen R. Miller, *J. Chem. Educ.*, 2016, 93 (9), pp 1536–1542 DOI: 10.1021/acs.jchemed.5b00945
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- [Measuring the Speed of Sound through Gases Using Nitrocellulose](#) Karen Sinclair Molek, Karl A. Reyes, Brandon A. Burnette, and Jacob R. Stepherson, *J. Chem. Educ.*, 2015, 92 (4), pp 762–766 DOI: 10.1021/ed400653t
- [Cost Effective Paper-Based Colorimetric Microfluidic Devices and Mobile Phone Camera Readers for the Classroom](#) Myra T. Koesdjojo, Sumate Pengpumkiat, Yuanyuan Wu, Anukul Boonloed, Daniel Huynh, Thomas P. Remcho, and Vincent T. Remcho, *J. Chem. Educ.*, 2015, 92 (4), pp 737–741 DOI: 10.1021/ed500401d
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- [Are the Concepts of Dynamic Equilibrium and the Thermodynamic Criteria for Spontaneity, Nonspontaneity, and Equilibrium Compatible?](#) Lee J. Silverberg, Lionel M. Raff, *J. Chem. Educ.*, 2015, 92 (4), pp 655–659 DOI: 10.1021/ed500660j
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- [Binary Solid–Liquid Phase Diagram of Phenol and t-Butanol: An Undergraduate Physical Chemistry Experiment](#) Xinhua Xu, Xiaogang Wang, and Meifen Wu, *J. Chem. Educ.*, 2014, 91 (6), pp 929–933 DOI: 10.1021/ed400598s
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## Dans Chemistry Education Research and Practice

- [University chemistry students' interpretations of multiple representations of the helium atom](#) Zahilyn D. Roche Allred and Stacey Lowery Bretz, *Chem. Educ. Res. Pract.*, 2019,20, 358-368 DOI: 10.1039/C8RP00296G

## Springer

- [Some remarks concerning the thermodynamics of the simple ideal gas and related mathematical background](#), Láng, G.G. *ChemTexts* (2016) 2: 10. doi:10.1007/s40828-016-0028-2

## Divers

- [The hot chocolate effect might have practical application](#)
  - [Contactless, probeless and non-titrimetric determination of acid–base reactions using broadband acoustic resonance dissolution spectroscopy \(BARDS\)](#), M. Rizwan Ahmed, Sean McSweeney, Jacob Krüse, Bastiaan Vos and Dara Fitzpatrick, *Analyst*, 2018, 956-962. DOI : 10.1039/C7AN01447C

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