

Nicole M Becker

List of Publications by Year in descending order

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Version: 2024-02-01

26
papers

644
citations

687363

13
h-index

580821

25
g-index

26
all docs

26
docs citations

26
times ranked

334
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Reasoning using particulate nature of matter: An example of a sociochemical norm in a university-level physical chemistry class. <i>Chemistry Education Research and Practice</i> , 2013, 14, 81-94. | 2.5 | 82 |
| 2 | Students' understanding of mathematical expressions in physical chemistry contexts: An analysis using Sherin's symbolic forms. <i>Chemistry Education Research and Practice</i> , 2012, 13, 209-220. | 2.5 | 77 |
| 3 | Characterizing Students' Mechanistic Reasoning about London Dispersion Forces. <i>Journal of Chemical Education</i> , 2016, 93, 1713-1724. | 2.3 | 64 |
| 4 | Translating across macroscopic, submicroscopic, and symbolic levels: the role of instructor facilitation in an inquiry-oriented physical chemistry class. <i>Chemistry Education Research and Practice</i> , 2015, 16, 769-785. | 2.5 | 63 |
| 5 | Engaging students in analyzing and interpreting data to construct mathematical models: an analysis of students' reasoning in a method of initial rates task. <i>Chemistry Education Research and Practice</i> , 2017, 18, 798-810. | 2.5 | 42 |
| 6 | College chemistry students' understanding of potential energy in the context of atomic-molecular interactions. <i>Journal of Research in Science Teaching</i> , 2014, 51, 789-808. | 3.3 | 39 |
| 7 | ADAPTING A METHODOLOGY FROM MATHEMATICS EDUCATION RESEARCH TO CHEMISTRY EDUCATION RESEARCH: DOCUMENTING COLLECTIVE ACTIVITY. <i>International Journal of Science and Mathematics Education</i> , 2012, 10, 193-211. | 2.5 | 37 |
| 8 | The biochemistry tetrahedron and the development of the taxonomy of biochemistry external representations (TOBER). <i>Chemistry Education Research and Practice</i> , 2012, 13, 296-306. | 2.5 | 32 |
| 9 | A Review of Research on Process Oriented Guided Inquiry Learning: Implications for Research and Practice. <i>Journal of Chemical Education</i> , 2020, 97, 3506-3520. | 2.3 | 31 |
| 10 | You Are What You Assess: The Case for Emphasizing Chemistry on Chemistry Assessments. <i>Journal of Chemical Education</i> , 2021, 98, 2490-2495. | 2.3 | 28 |
| 11 | Undergraduate Chemistry Students' Conceptualization of Models in General Chemistry. <i>Journal of Chemical Education</i> , 2019, 96, 455-468. | 2.3 | 21 |
| 12 | Mapping undergraduate chemistry students' epistemic ideas about models and modeling. <i>Journal of Research in Science Teaching</i> , 2020, 57, 794-824. | 3.3 | 20 |
| 13 | A Review of Research on the Teaching and Learning of Chemical Bonding. <i>Journal of Chemical Education</i> , 2022, 99, 2451-2464. | 2.3 | 14 |
| 14 | Evaluating students' abilities to construct mathematical models from data using latent class analysis. <i>Chemistry Education Research and Practice</i> , 2018, 19, 375-391. | 2.5 | 12 |
| 15 | Students' interpretation and use of graphical representations: insights afforded by modeling the varied population schema as a coordination class. <i>Chemistry Education Research and Practice</i> , 2020, 21, 536-560. | 2.5 | 12 |
| 16 | Beyond instructional practices: Characterizing learning environments that support students in explaining chemical phenomena. <i>Journal of Research in Science Teaching</i> , 2022, 59, 841-875. | 3.3 | 11 |
| 17 | Discourse Analysis as a Tool To Examine Teaching and Learning in the Classroom. <i>ACS Symposium Series</i> , 2014, , 61-81. | 0.5 | 8 |
| 18 | Energy in Chemical Systems: An Integrated Approach. , 2014, , 301-316. | | 8 |

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|----|--|-----|-----------|
| 19 | Exploring the Productive Use of Metonymy: Applying Coordination Class Theory to Investigate Student Conceptions of Rate in Relation to Reaction Coordinate Diagrams. <i>Journal of Chemical Education</i> , 2020, 97, 2065-2077. | 2.3 | 7 |
| 20 | Evaluation of the students'™ understanding of models in science (SUMS) for use in undergraduate chemistry. <i>Chemistry Education Research and Practice</i> , 2021, 22, 62-76. | 2.5 | 7 |
| 21 | Making sense of sensemaking: using the sensemaking epistemic game to investigate student discourse during a collaborative gas law activity. <i>Chemistry Education Research and Practice</i> , 2021, 22, 328-346. | 2.5 | 7 |
| 22 | Undergraduate Chemistry Students'™ Epistemic Criteria for Scientific Models. <i>Journal of Chemical Education</i> , 2020, 97, 16-26. | 2.3 | 6 |
| 23 | A Modeling Perspective on Supporting Students'™ Reasoning with Mathematics in Chemistry. <i>ACS Symposium Series</i> , 2019, , 9-24. | 0.5 | 5 |
| 24 | Analyzing Students'™ Construction of Graphical Models: How Does Reaction Rate Change Over Time?. <i>Journal of Chemical Education</i> , 2020, 97, 3948-3956. | 2.3 | 5 |
| 25 | Supporting Engagement in Metamodeling Ideas in General Chemistry: Development and Validation of Activities Designed Using Process Oriented Guided Inquiry Learning Criteria. <i>Journal of Chemical Education</i> , 2020, 97, 4276-4286. | 2.3 | 3 |
| 26 | From Ideas to Items: A Primer on the Development of Ordered Multiple-Choice Items for Investigating the Progression of Learning in Higher Education STEM. <i>Journal of Chemical Education</i> , 2021, 98, 714-729. | 2.3 | 3 |