

REFERENCES

- Abraham, et. al., (1992), "Understanding and Misunderstanding of Eight Grades of Five Chemistry Concept in Text Book", *Journal of Research in Science Teaching*, 29(12).
- Azliandry, H., (2007), *Analisis Miskonsepsi Siswa Kelas XI MAN 1 Medan dan Upaya Penanggulangannya pada Pokok Bahasan Termokimia*, Skripsi, FMIPA, Unimed, Medan.
- Bello, S., (2001), *The Conception of Science, Alternative Conceptions and the STS Approach in the Teaching-Learning Process of the Concepts of Acidity and Basicity*, Universidad Nacional Autónoma de México (UNAM), Mexico.
- Bergquist W. and Heikkinen H., (1990), Student ideas regarding chemical equilibrium: what written test answers do not reveal, *Journal Chemical Education.*, 67, 1000-1003.
- Bilgin I. and Geban I., (2006), The effect of cooperative learning approach based on conceptual change condition on students' understanding of chemical equilibrium concepts, *Journal Science Education Technology.*, 15, 31-46.
- Brown, D., and J. Clement., (1991), Classroom teaching experiments in mechanics. In *Research in Physics Learning: Theoretical Issues and Empirical Studies*, R. Duit, F. Goldberg, and H. Niedderer, eds. San Diego, Calif.: San Diego State University.
- Çetingül, I. and Geban, O., (2011), Using conceptual change texts with analogies for misconceptions in acids and bases, *Journal of Education*, 41: 112-123.
- Committee on Undergraduate Science Education, National Research Council (1997), *Science Teaching Reconsidered: A Handbook*, ISBN: 0-309-52275-7, 104 pages
- Cros D., Maurin M., Amouroux R., Chastrette M., Lebe, J. and Fayol M., (1986), Conceptions of first-year university students of the constituents of matter and the notions of acids and bases, *European Journal Science Education.*, 8, 305-313.
- Demircioglu G., Ayas A. and Demircioglu H., (2005), Conceptual change achieved through a new teaching program on acids and bases, *Chemical Education Research Practice.*, 6, 36-51.

- Erdemir, A., Geban, O. and Uzuntiryaki, E., (2000), Freshmen students' misconception in chemical equilibrium, *Journal of Education*, 18:79 – 84.
- Gerard, D.T., Ed, V.D.B., (*Cultural Factors in the Origin and Remediation of Alternative Conceptions, Proceedings August 1993.*)
- Gütl, C., and Garcia-Barrios, V.M., *The Application of Concepts for Learning and Teaching*, Institute for Information Systems and Computer Media, Graz University of Technology, Austria
- Hameed H., Hackling M. W. and Garnett P. J., (1993), Facilitating conceptual change in chemical equilibrium using a CAI strategy, *International Journal Science Education.*, 15, 221-230.
- Harizal, (2012), *Analyzing Of Students' Misconception On Acid-Base Chemistry At Senior High School In Medan*, Thesis, Mathematic and Natural Science Faculty, State University of Medan, Medan.
- Hartati, A., (2010), *Analisis Miskonsepsi Siswa dan Cara Mengatasinya pada Pokok Bahasan Struktur Atom*, Skripsi, FMIPA, Unimed, Medan.
- Herron, J. D., (1996), *The chemistry classroom: formulas for successful teaching*, Washington, DC: American Chemical Society.
- Hewson, M. G. and Hewson, P.W., (1983), Effect of instruction using students' prior knowledge and conceptual change strategies on science learning, *Journal of Research in Science Technology*, 20(8), 731-743.
- Husseini, A., (2011), *Analyzing Of Students' Misconception On Chemical Equilibrium At Senior High Schools In Medan*, Thesis, Mathematic and Natural Science Faculty, State University of Medan, Medan.
- Johari, J.M.C., and Rachmawati, M., (2010), *Chemistry for Senior High School Grade XI*, Esis, Jakarta.
- Johnstone A. H., (1991), Why is science difficult to learn? things are seldom what they seem, *J. Comput. Assist. Lear.*, 7, 75-83.
- Nakhleh M. B., (1992), Why some students don't learn chemistry: Chemical misconceptions, *Journal of Chemical Education.*, 69, 191-196.
- Orgil, M., and Sutherland, A., (2008), Undergraduate Chemistry Students' Perceptions of and Misconceptions about Buffers and Buffer Problems, *Chemistry Education Research Practice* 9:131-143.

- Kaya, E. and Geban, O., (2012), Facilitating conceptual change in rate of reaction concepts using conceptual change oriented instruction, *Education and Science*, Vol.37, No 163.
- Kolomuç, A. and Tekin, S., (2011), Chemistry Teachers Misconception Concerning Concept of Chemical Reaction Rate, *Eurasian Journal of Physics and Chemistry Education*, 3(2): 84-101.
- Muchtar, Z and Harizal., (2012), Analyzing of students' misconception on acid-base chemistry at senior high schools in medan, *Journal of Education and Practice*, ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)Vol 3,No. 15
- Nakiboglu, C., (2003), Instructional Misconception of Turkish Prospective Chemistry Teacher about Atomic Orbital and Hybridization, *Chemistry Education: Research and Practice*, Vol.4 No.2, pp 171-188.
- Nakiboglu, C., and Tekin, B.B., (2006), Identifying Students' Misconceptions about Nuclear Chemistry, *Chemical Education Research*, Vol. 83, No. 11.
- Pedrosa, M.A., Dias, M.H., (2000), *Chemistry Textbooks Approaches to Chemical Equilibrium and Student Alternative Conceptions*, *Chemistry Education: Research and Practice in Europe*, Vol 1, No.2, Hal. 227-236.
- Peterson, R. F. (1986) *The development, validation and application of a diagnostic test measuring year 11 and 12 students' understanding of covalent bonding and structure*. Unpublished Master's thesis, Curtin University of Technology, Western Australia.
- Purba, Michael, (2006), *Kimia 2 untuk SMA kelas XI*, Erlangga, Jakarta.
- Ross, B., and Munby, H., (1991), Concept Mapping and Misconceptions: A Study on High-School Students' Understanding to Substance-Based Conceptions, *Cognition and Instruction*, 18(1): 1-34.
- Sanger, M.J. and Greenbowe, T.J., (1999), An Analysis of College Chemistry Textbooks As Sources of Misconceptions and Errors in Electrochemistry, *Journal of Chemical Education*, Vol 76, No. 6.
- Şendur, G. Toprak, M. and Şahin Pekmez, E., (2010), Analyzing of Students' Misconceptions About Chemical Equilibrium, *International Conference on New Trends in Education and Their Implications*, ISBN: 978 605 -364 104 9. Antalya-Turkey.
- Sheppard K., (1997), *A qualitative study of high school students' pre- and post-instructional conceptions in acid-base chemistry*, Unpublished Doctoral

Dissertation, Teachers College, Columbia University, New York City, New York, U.S.A.

Sheppard K., (2006), High school students' understanding of titrations and related acid-base phenomena, *Chemical Education Research & Practice.*, 7, 32-45.

Simamora, M. and Redhana, I.W., (2007), Identifikasi Miskonsepsi Guru Kimia Pada Pembelajaran Konsep Struktur Atom, *Jurnal Penelitian dan Pengembangan Pendidikan*, 1(2), 148-160.

Skelly, K. M., and Hall, D., (1993), *The development and validation of a categorization of sources of misconceptions in chemistry*, Paper presented at the Third International Seminar on Misconceptions and Educational Strategies in science and Mathematics (Ithaca, August).

Suparno, P., (2005), *Miskonsepsi dan Perubahan Konsep dalam Pendidikan Fisika*, Grasindo. Jakarta.

Susilowati, P., (2009), *Theory and Application of Chemistry 2 for Grade XI of Senior High School and Islamic Senior High School*, Bilingual, Solo.

Tan, K.C.D. and Treagust, D.F., (1999), Evaluating students' understanding of chemical bonding, *School Science Review*, 75-85.

Taber, K. S., (2002). *Alternative Conceptions In Chemistry: Prevention, Diagnosis And Cure?* London: The Royal Society of Chemistry.

Topal, G. Oral, B. and Özden, M., (2008), University and Secondary School Students' Misconceptions about the Concept of "Aromaticity" in Organic Chemistry, *International Journal of Environmental & Science Education*, 2(4), 135-143, ISSN 1306-3065

Treagust, D.F. (1988). Development and use of diagnostic tests to evaluate students misconceptions in science. *International Journal Science Education* 10 (2):159-169.

Treagust, D.F. Diagnostic assessment in science as a means to improving teaching, learning and retention. *UniServe Science Assessment Symposium Proceedings*. Page 1-9.

Tüysüz, Cengiz. (2009), Development of two-tier diagnostic instrument and assess students' understanding in chemistry, *Scientific Research and Essay* Vol. 4 (6) pp. 626-631