

## عنوان مقاله:

Students' Misconceptions on Acid-Base Chemistry

## محل انتشار:

چهارمین کنگره ملی مهندسی مکانیک و مهندسی شیمی (سال: 1397)

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## خلاصه مقاله:

In current study , Students' misconceptions were investigated on acid-base chemistry at senior high schools in West Azerbaijan. The study involved 462 of XII grade students from six different schools in west Azerbaijan selected based on their accreditation. This study is aimed at determining students' misconceptions about acids and bases. In order to fulfill this aim, open-ended diagnostic questions and semi-structured interviews were used. The diagnostic questions were administered to 462 students experimental science field senior high schools in Iran. In addition 36 students were interviewed in order to clarify their written responses and to further probe students' conceptual understandings of the questions asked in the test. The findings revealed a number of misconceptions. The results have implications for education acid-base chemistry, suggesting that a substantial review of teaching strategies is needed. Teachers should be aware of students' prior knowledge and misconceptions on acids and bases, because they are strong predictors of student achievement. In short, when suitable strategies are used in the teaching of the unit acids and bases' , they are more likely to cause a significantly better removal of misconceptions and acquisition of scientifically sound concepts.

## کلمات کلیدی:

students' misconceptions, chemistry education , acid- base chemistry, active learning

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