

**Sonochemistry** (CHEMISTRY – Chris Conoley and Phil Hills - 2002)

1. What is this text about? (*to be answered last*)
2. What is sound? What is ultrasound?
3. What was discovered in the 1920s?
4. What is sonochemistry?
5. Why did sonochemistry really take off from the 1980s only?
6. What does ultrasound produce in a liquid? What is the name of that effect?
7. What can you say about the temperature in a liquid that is excited by ultrasound?
8. What is the effect of the generated hot spots on chemical reactions? Which kinetics factor is involved here?
9. What else can the hot spots produce?
10. Give the electronic structure of hydrogen (Z=1) and oxygen (Z=8) as well as Lewis dash structure of H<sub>2</sub>O, H• and HO•. Do H• and HO• follow the octet or the duet rule? Explain why radicals are highly reactive.
11. What is the formula of hydrogen gas? of hydrogen peroxide? Explain why these compounds are stable.
12. What is an oxidizing agent?
13. What is a catalyst? What type of catalysts can be produced by sonochemistry? Why are they interesting? Which catalyst could they replace?
14. What is polymer?
15. Give three other examples of applications of sonochemistry (see line 30 to 41).

**Sonochemistry** (CHEMISTRY – Chris Conoley and Phil Hills - 2002)

1. What is this text about? (*to be answered last*)
2. What is sound? What is ultrasound?
3. What was discovered in the 1920s?
4. What is sonochemistry?
5. Why did sonochemistry really take off from the 1980s only?
6. What does ultrasound produce in a liquid? What is the name of that effect?
7. What can you say about the temperature in a liquid that is excited by ultrasound?
8. What is the effect of the generated hot spots on chemical reactions? Which kinetics factor is involved here?
9. What else can the hot spots produce?
10. Give the electronic structure of hydrogen (Z=1) and oxygen (Z=8) as well as Lewis dash structure of H<sub>2</sub>O, H• and HO•. Do H• and HO• follow the octet or the duet rule? Explain why radicals are highly reactive.
11. What is the formula of hydrogen gas? of hydrogen peroxide? Explain why these compounds are stable.
12. What is an oxidizing agent?
13. What is a catalyst? What type of catalysts can be produced by sonochemistry? Why are they interesting? Which catalyst could they replace?
14. What is polymer?
15. Give three other examples of applications of sonochemistry (see line 30 to 41).

**Sonochemistry** (CHEMISTRY – Chris Conoley and Phil Hills - 2002)

1. What is this text about? (*to be answered last*)
2. What is sound? What is ultrasound?
3. What was discovered in the 1920s?
4. What is sonochemistry?
5. Why did sonochemistry really take off from the 1980s only?
6. What does ultrasound produce in a liquid? What is the name of that effect?
7. What can you say about the temperature in a liquid that is excited by ultrasound?
8. What is the effect of the generated hot spots on chemical reactions? Which kinetics factor is involved here?
9. What else can the hot spots produce?
10. Give the electronic structure of hydrogen (Z=1) and oxygen (Z=8) as well as Lewis dash structure of H<sub>2</sub>O, H• and HO•. Do H• and HO• follow the octet or the duet rule? Explain why radicals are highly reactive.
11. What is the formula of hydrogen gas? of hydrogen peroxide? Explain why these compounds are stable.
12. What is an oxidizing agent?
13. What is a catalyst? What type of catalysts can be produced by sonochemistry? Why are they interesting? Which catalyst could they replace?
14. What is polymer?
15. Give three other examples of applications of sonochemistry (see line 30 to 41).