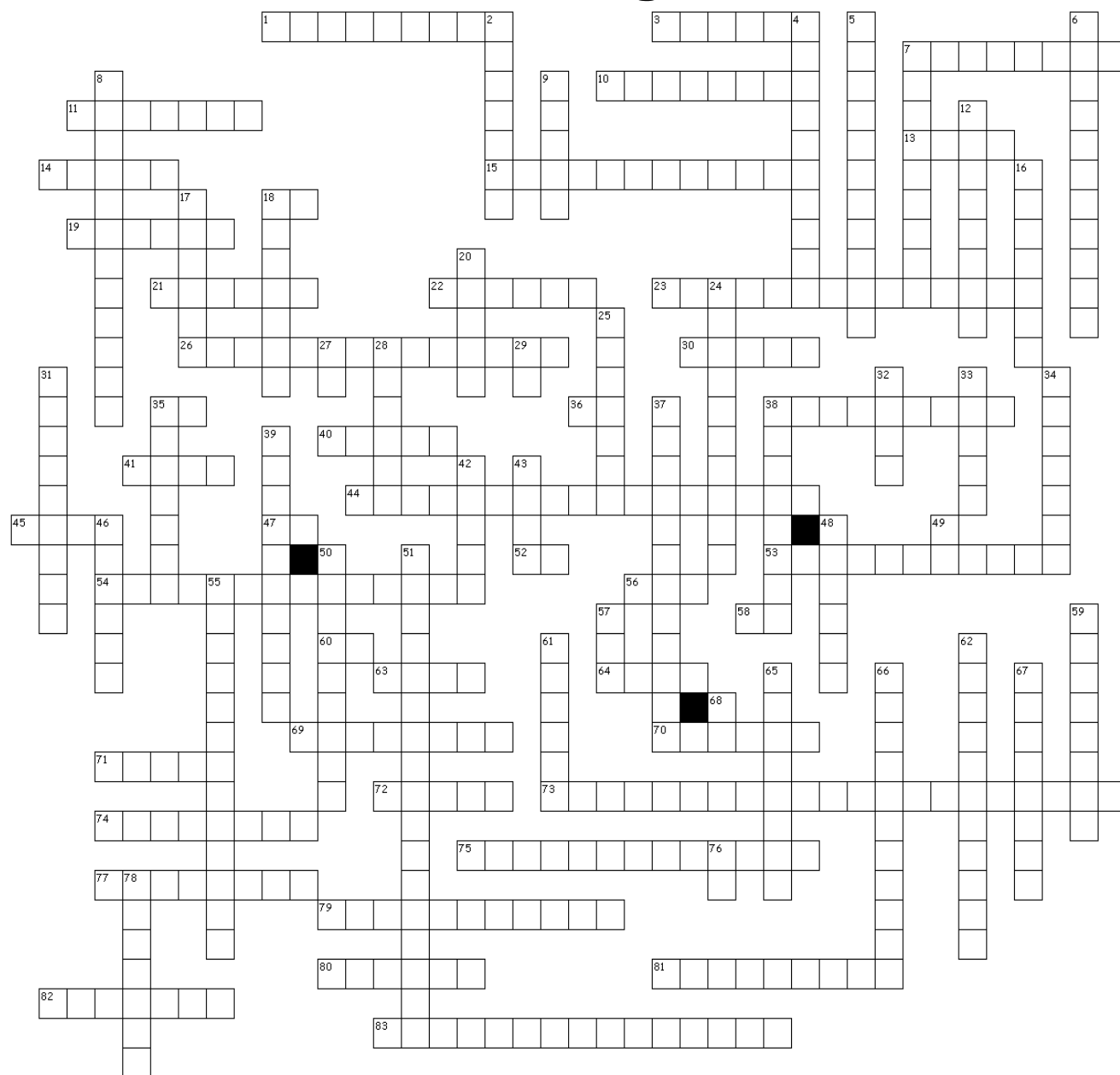


Bonding



Across

1. particle smaller than the atom
3. horizontal row in the periodic table
7. division of an energy level
10. two or more atoms of an element having the same # protons, but different # neutrons
11. particle found in the nucleus of an atom
13. Fe
14. bond formed by transfer of electrons
15. # protons
18. mercury
19. a polar molecule
21. positive ion
22. positively charged subatomic particle
23. shape with 3 bonds around central atom
26. force holding molecules to each other
30. negative ion
35. lead
36. osmium
38. the study and investigation of the structure and properties of matter
40. model for molecular shape based on repulsion of electron pairs
41. the force holding atoms together in a compound
44. shape with 3 bonds + pair e^-
45. shape with 2 bonds, and 2 pair e^-
47. hafnium
52. antimony
53. substance whose aqueous solution conducts electricity
54. force holding atoms together in molecules
56. Sn
58. platinum
60. gold
63. smallest particle of an element possessing the properties of that element

64. Ne
69. equal sharing of electrons
70. bond sharing two pairs of electrons
71. B
72. element which tends to lose electrons in chemical reactions
73. description of the energy levels and sublevels for all the electrons in an atom
74. element in group 18
75. pictorial arrangement of the elements based on their electron configurations
77. unsymmetrical charge distribution
79. the properties of the elements are a periodic function of their atomic numbers
80. vertical column in the periodic table
81. the tendency of atoms to react to get 8 valence electrons
82. neither positive nor negative
83. exceptionally strong type of dipole interaction

Down

2. solid in which the particles are arranged in a regular, repeating pattern
4. London forces
5. weak forces of attraction between molecules
6. shape with 4 bonds around central atom
7. has properties of metals and nonmetals
8. concerning the amounts of materials present
9. Rn
12. two or more elements combined by chemical bonds
16. neutral subatomic particle
17. metal in group 1
18. element in group 17
20. vertical column in the periodic table
24. energy required to remove an electron
25. mass per unit volume
27. manganese
28. shape with 2 bonds around central atom
29. arsenic
31. element which tends to gain electrons in chemical reactions
32. Zn
33. group of three elements
34. the systematic investigation of nature
35. substance produced as the result of a chemical change
37. force holding metal atoms together, characterized by free electrons
38. bond formed by sharing electrons
39. the application of scientific principles for practical use
42. unequal sharing of electrons
43. the measure of the amount of matter
46. bond sharing three pairs of electrons
48. Ce
49. molybdenum
50. has properties of metals and nonmetals
51. used to determine bond type
55. metal in group 2
57. particle with electric charge
59. negatively charged subatomic particle
61. bond sharing one pair of electrons
62. diagram of the location of the valence electrons
65. neutral particles with two or more atoms held together with covalent bonds
66. concerning the kinds of matter present
67. substance that undergoes a chemical change
68. copper
76. silver
78. space that can be occupied by 0, 1, or 2 electrons