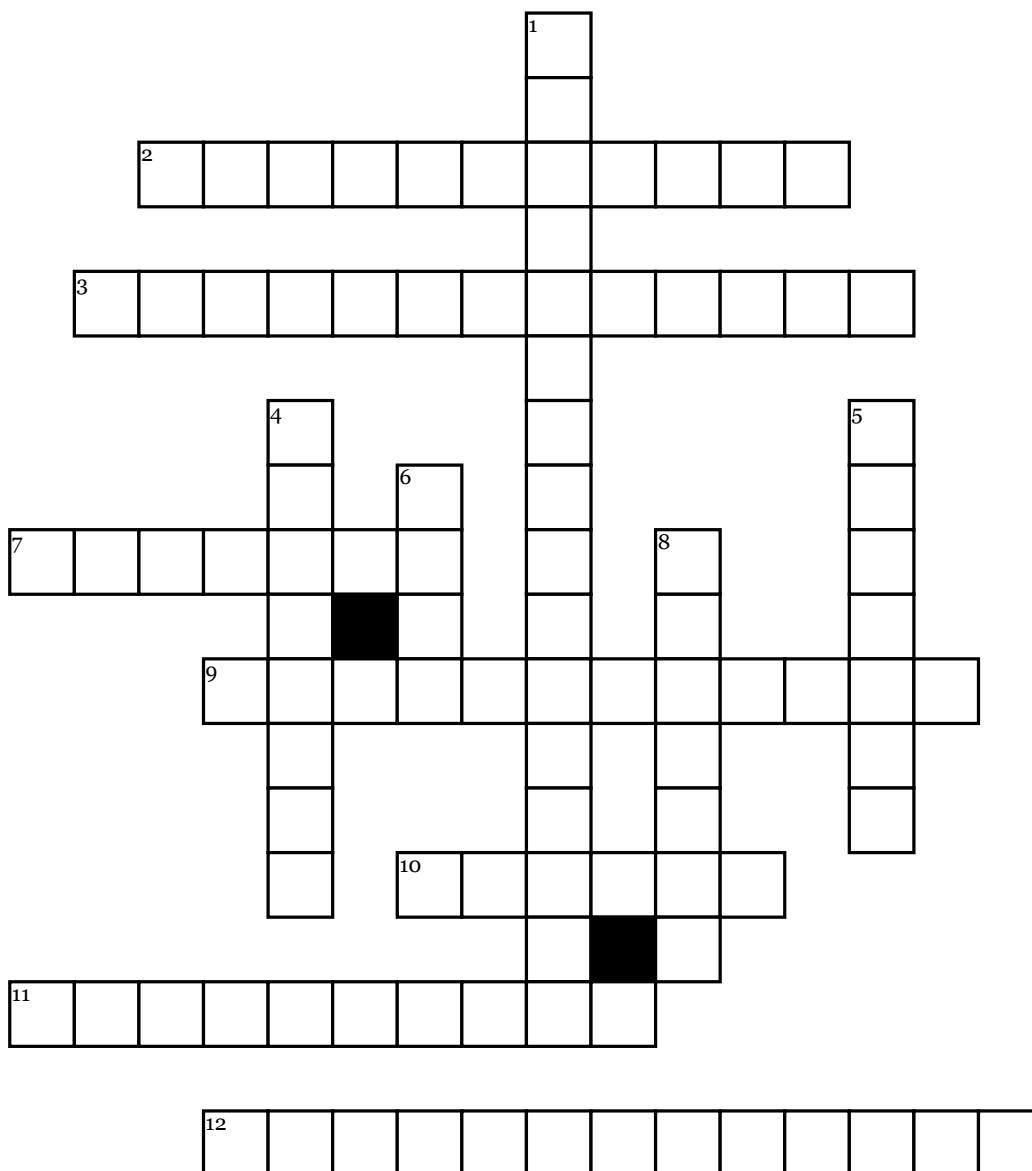


Atomic Structure



Across

- 2.** the fixed amount of energy that a system described by quantum mechanics, such as a molecule, atom, electron, or nucleus, can have
- 3.** An atomic orbital is a mathematical function that describes the wave-like behavior of either one electron or a pair of electrons in an atom
- 7.** a part or aspect of something abstract, especially one that is essential or characteristic:
- 9.** the number of protons in the nucleus of an atom, which determines the chemical properties of an element and its place in the periodic table.

- 10.** a stable subatomic particle occurring in all atomic nuclei, with a positive electric charge equal in magnitude to that of an electron, but of opposite sign.
- 11.** the mass of an atom of a chemical element expressed in atomic mass units. It is approximately equivalent to the number of protons and neutrons in the atom (the mass number) or to the average number allowing for the relative abundances of different isotopes.
- 12.** usually refers to the one- or two-letter abbreviation for a chemical element, though the term can be applied to the alchemical symbols also

Down

- 1.** an electron in an outer shell of an atom that can be lost to or shared with another atom to form a molecule
- 4.** a stable subatomic particle with a charge of negative electricity, found in all atoms and acting as the primary carrier of electricity in solids
- 5.** the central and most important part of an object, movement, or group, forming the basis for its activity and growth
- 6.** basic unit of life
- 8.** a subatomic particle of about the same mass as a proton but without an electric charge, present in all atomic nuclei except those of ordinary hydrogen