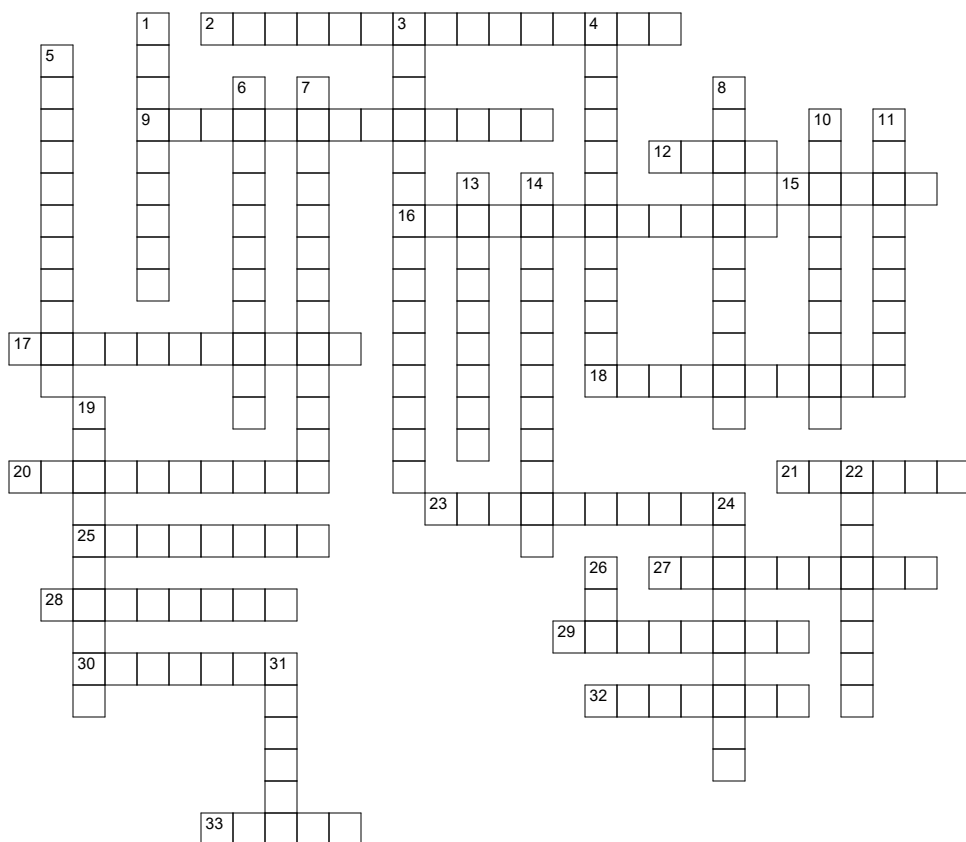


Kinetics



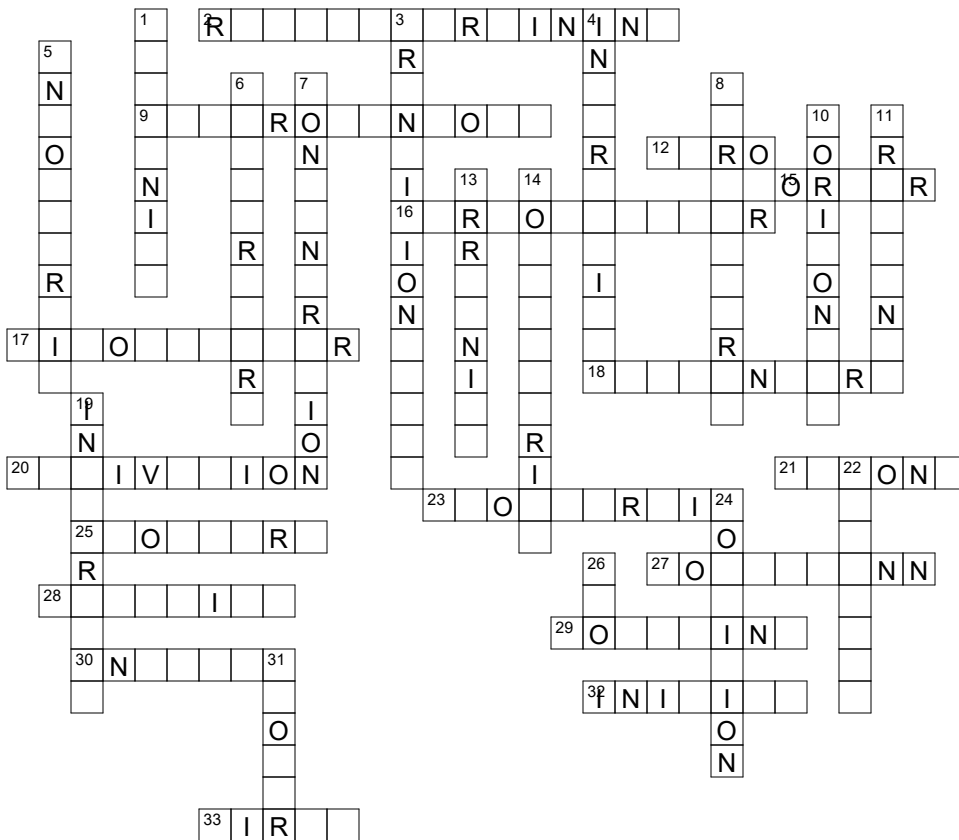
Across

- The step in a mechanism with the largest E_a is the _____ step
- Modern cars use solid platinum metal as a catalyst to convert NO_2 gas to N_2 gas. The Pt is a _____ catalyst.
- If the concentration of a reactant has no effect on the reaction's rate, that reactant is _____-order
- In the rate law, $\text{Rate} = k[\text{A}]^2$, the "2" is called the _____ with respect to "A"
- A _____ collision occurs when three particles collide
- A _____ collision is occurs when two particles collide
- A reaction is said to be _____ if it occurs in just one step/collision
- The _____ energy is needed to form the activated complex in a collision
- In _____-order reactions, each successive half-life is twice as long as the previous one
- A collision is _____ when its heat of reaction (ΔH) is negative
- A successful collision requires sufficient energy and the correct _____ among particles
- The _____ distribution shows the distribution of kinetic energy among particles in a system. It appears as a "bell curve"
- The _____ of a reaction is the time needed for half of a reactant to be consumed
- For the rate law, $\text{Rate} = k[\text{A}][\text{B}]^2$, Tripling [B] and _____ [A] would make the rate 18 times faster
- In living organisms, _____ are biological catalysts
- The differential rate law is usually determined using the method of _____ rates
- A graph of Rate vs [A] would be a rising straight line if A was _____-order

Down

- The reaction _____ is the series of steps/collisions that occur in an overall reaction
- Another name for "activated complex"
- In a reaction mechanism, an _____ is produced in an early step but then used up again in a later step
- An _____ reaction is one that absorbs energy. The products of the reaction have more energy than the reactants.
- Rate constants are "constant" only at a given _____
- _____ of the reactants is a factor that influences rates of reaction
- Chopping up a solid or grinding it to a powder will increase its _____
- A graph of Rate vs [A] would be a _____ line if [A] was zero order
- With increased concentration of reactants, the collision _____ increases, increasing the rate of reaction
- This chemist showed how rate constants depend on temperature
- The _____ of a step in a mechanism describes how many reacting particles are involved
- The _____ rate law allows you to find the concentration of a reactant after some period of time
- A _____ speeds up a reaction by changing its mechanism. The new mechanism has a lower E_a .
- _____ theory is the central theory to kinetics
- When performing an integrated rate law analysis, the reactant should go through at least _____ half-lives
- The larger the E_a for a reaction, the _____ the reaction will be

Kinetics



Across

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