(66-240402-A) **Revolutionizing Carbon Dioxide Capture: Conventional Approaches Are Extremely Utilized in the Manufacturing Process of Traditional Bricks with the Locally Available Soils, Construction Waste Materials and ISF Slag Utilization Rate**

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1. The Impact of Construction on Global Emissions
    - Magnitude: The construction industry, encompassing the entire life cycle of buildings and infrastructure, directly or indirectly contributes to nearly 40% of global CO_2 emissions from fuel combustion and approximately 25% of overall greenhouse gas (GHG) emissions.
    - Challenge: To meet the Paris Agreement's 1.5-degree warming target, the construction and real estate ecosystem must eliminate annual emissions.
2. Key Strategies for Decarbonization
    a. Sustainable Materials
        - Cement and Steel: These materials constitute a significant portion of a building's emissions. By switching to greener versions and improving efficiency, lifetime emissions can be slashed by 44% by 2050.
        - Innovations: Researchers are exploring alternative materials with lower carbon footprints.

    b. Energy Efficiency
        - Building Performance: Improving energy efficiency in buildings reduces operational emissions.
        - Renewable Energy Integration: Incorporating solar panels, wind turbines, and other renewable sources minimizes reliance on fossil fuels.

    c. Circular Economy
        - Reuse and Recycling: Promoting circular practices for construction materials reduces the need for new production.
        - Waste Reduction: Minimizing waste during construction and demolition processes.
3. Policy and Investment
    - Policy Commitments: Governments must multiply policy commitments alongside concrete actions.
    - Investment in Efficiency: Stimulus packages can support sustainable infrastructure projects and job creation.
4. Collaboration and Innovation
    - Industry Collaboration: Construction companies, architects, and policymakers must collaborate to drive change.
    - Research and Development: Continued innovation in sustainable construction practices.
5. The Path Forward
    - Holistic Approach: Consider the entire life cycle of buildings—from design to demolition.
    - Global Cooperation: Addressing emissions requires collective efforts on a global scale.

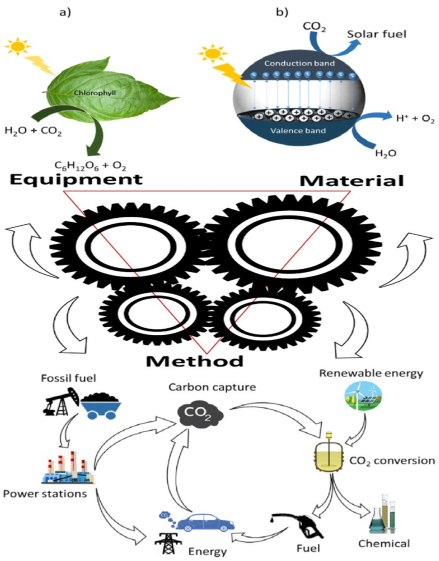

Figure 1.

1. Natural process of photosynthesis
2. Artificial process of photosynthesis
3. Integrated approach of process intensification
4. Carbon dioxide conversion cycle into a by or useful product.