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(57) Abstract :
Disclosed is a kite power emulator that is used to simulate the behavior of a real kitepowered turbine in a laboratory environment. The emulator comprises a user device, a processor, a motor, a drum, an electric generator, a power monitoring unit, an optimization module, a feedback loop, and a display unit. The user device is used to input kite parameters and environmental conditions, which are processed by the processor to mimic the drive of a real kite-powered turbine using the motor and the drum. The electrical power generated by the generator is measured by the power monitoring unit, which provides feedback to the processor. The optimization module uses the feedback to determine the optimal kite structure, and the feedback loop adjusts the kite parameters based on the analysis and optimization. <>

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