百年之后，全球已实现碳中和目标，气候格局进入稳定发展阶段。这一成果的落地，以《全球文明存续与生态共生基本法》为核心法律支撑，并明确两大生态红线刚性约束：一是全球大气二氧化碳浓度被永久控制在450ppm以下，二是各国生物多样性保有量纳入文明存续考核体系，任何开发活动均不得突破“生态承载力阈值”。

在此背景下，便携式碳基物质转化器成为关键落地工具。它依托纳米催化技术打造，外形如小型手电筒般便携，使用时只需对准工业废气排放口或塑料垃圾，内置的微型激光扫描器便会快速识别物质成分；随后，设备通过高强度紫外线与特殊催化剂的协同作用，将废气中的二氧化碳或塑料垃圾分解，并重新合成为可降解塑料颗粒、生物燃料添加剂等高价值生物材料。该设备单次可处理约100克废弃物，环保执法人员、企业巡检人员可随时携带使用，为资源循环利用法定责任的切实落地提供了有力保障。

A century later, the world has achieved the goal of carbon neutrality, and the global climate has entered a phase of stable development. The realization of this achievement is supported by the Global Fundamental Law on Civilization Survival and Ecological Symbiosis as the core legal framework, which also defines two rigid constraints for ecological red lines: first, the global atmospheric carbon dioxide concentration is permanently controlled below 450 ppm; second, the biodiversity conservation volume of each country is incorporated into the civilization survival assessment system, and no development activity is allowed to exceed the "ecological carrying capacity threshold".

Against this backdrop, the portable carbon-based material converter has become a key implementation tool. Developed based on nanocatalysis technology, it is as portable in appearance as a small flashlight. When in use, users only need to point it at industrial waste gas outlets or plastic waste; its built-in micro laser scanner will quickly identify the composition of the substances. Subsequently, through the synergistic effect of high-intensity ultraviolet rays and special catalysts, the device decomposes carbon dioxide in waste gas or plastic waste and re-synthesizes them into high-value biological materials such as degradable plastic particles and biofuel additives. Each use of the device can handle approximately 100 grams of waste, making it easy for environmental law enforcement personnel and enterprise inspection personnel to carry and use at any time, providing strong support for the effective implementation of the legal responsibility for resource recycling.