

# ポータブルエネルギーハーベスティングデバイス

Portable energy harvesting device

## 身の周りのエネルギーを採取し電力を得て、 小型軽量で手軽に持ち運べるデバイス

A small, lightweight and easily portable device that can harvest the energy around you and generate electricity

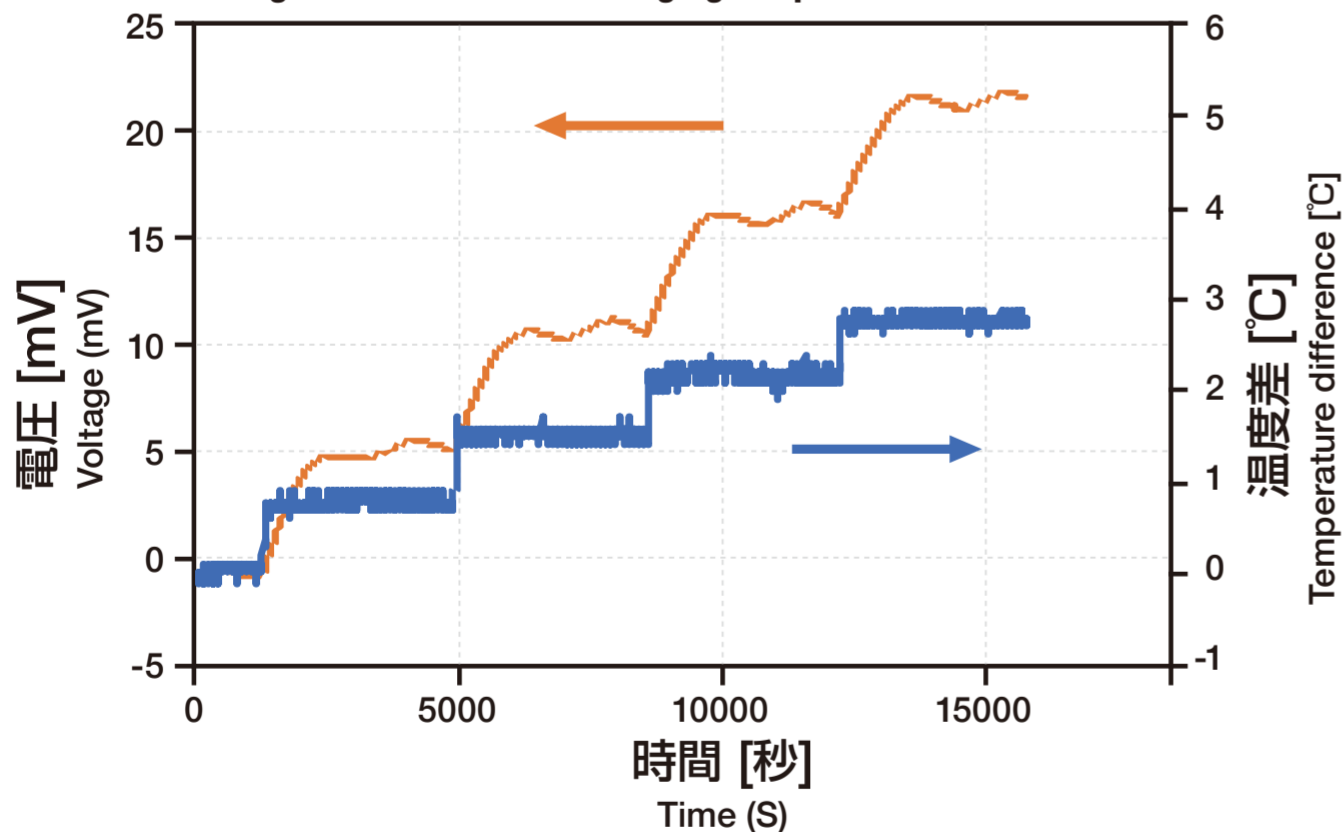
### 特徴 | Characteristics

- **小さな温度差でも発電可能**  
Power can be generated even with small temperature differences
- **希少金属をナノ炭素材に置き換え環境に配慮**  
Environmentally friendly by replacing rare metals with nanocarbon materials
- **小型で軽量**  
Small and lightweight

### 技術紹介 | Introduction to Technology

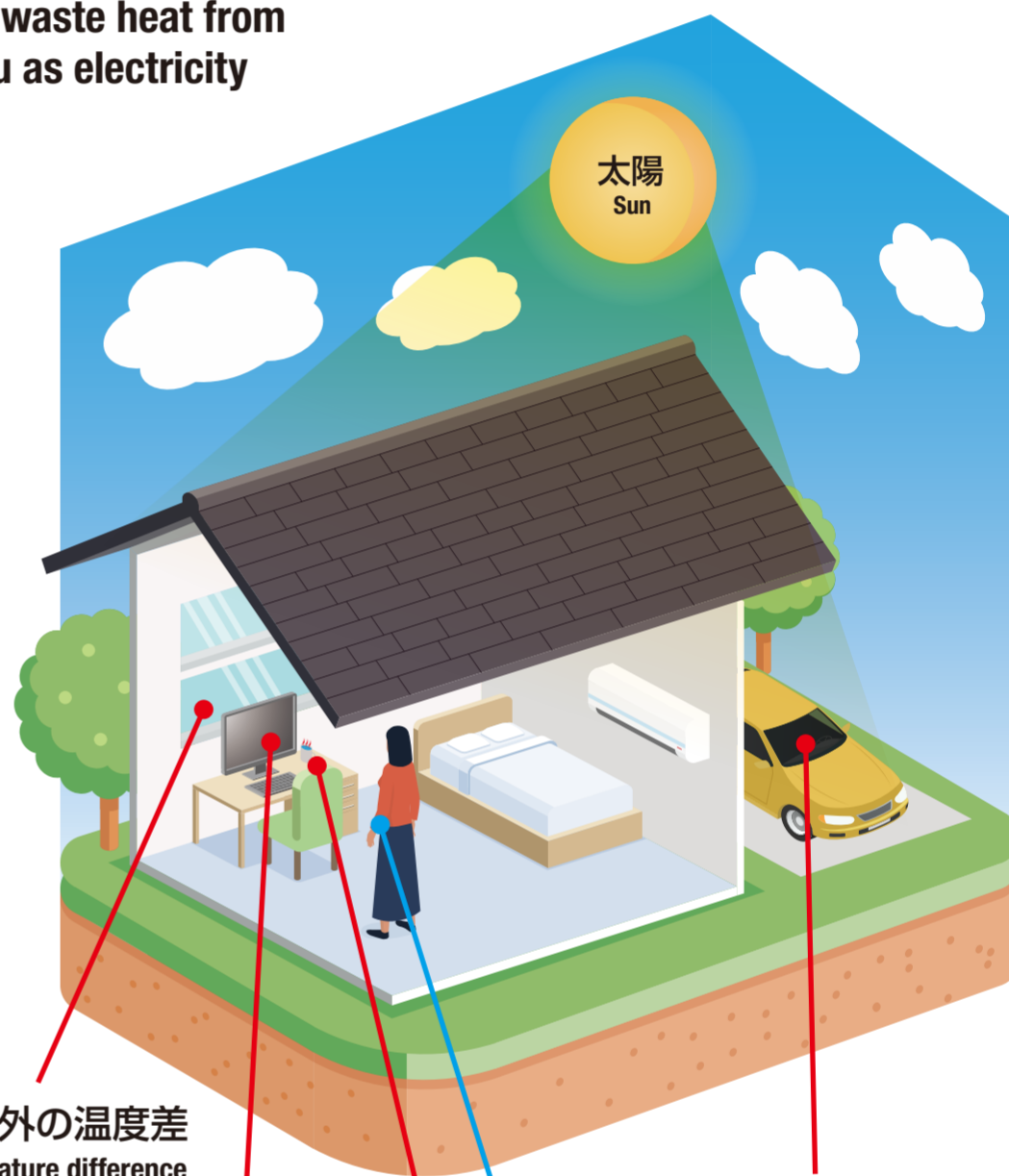
- **温度差で発電する熱電素子**  
Thermoelectric element that generates electricity based on temperature difference

温度差を変化させたときの1セルの電圧  
Voltage of one cell when changing temperature difference



### 想定使用場面 | Assumed usage scenario

- **身の周りの排熱を電力として回収**  
Collecting waste heat from around you as electricity



窓: 室内と室外の温度差  
Window : Temperature difference between indoors and outdoors

家電(PC等): 発熱部と空気の温度差  
Home appliances (PC etc.): Temperature difference between heat generating part and air

コップ: 温かい飲み物と空気の温度差  
Cup : Temperature difference between hot drink and air

車: 日光で温まったダッシュボードと空気の温度差  
Car : Temperature difference between the dashboard heated by sunlight and the air

- **デバイス装着例**  
Device Attachment Example

ポータブルエネルギーハーベスティングデバイス  
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人: 体温と空気の温度差  
Human : Human temperature difference between body temperature and air

体温  
Body temperature

### 用途例 | Applications

- **体温を利用した用途**  
Use of body temperature

→ **低い温度差でも発電するウェアラブルデバイス用電源**  
Power supply for wearable devices that generates power even at low temperature differences



リストバンド・ブレスレット型  
Wristband/Bracelet Type



メガネ・ゴーグル型  
Glasses/Goggles



スピーカー型  
Speaker type