

# Nanocarbon materials for sustainable battery technology

## ***NACAB***

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## *NACAB*

Some of the issues with currently Li-ion batteries:

- Li is scarce and thus expensive
- Cathodes are made of transition metal oxides
- “Rocking chair” design means Li atoms are used both at the anode and cathode

*NACAB*'s proposed solution:

- Use alternative inexpensive ions (Na and K)
- Replace metal oxide with carbon cathode
- All-carbon design enables positive ions at the anode and negative at the cathode, storing twice as much charge (dual-ion design)

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**NACAB's** approach:

- Tight combination of experiments and atomistic simulation to design new hybrid nanocarbon materials for cheap and scalable batteries

