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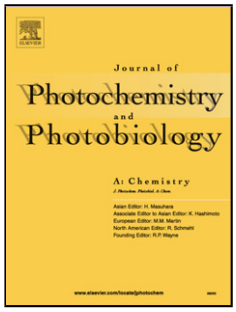

Title: Vein graphite-based counter electrodes for dye-sensitized solar cells

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Vein graphite-based counter electrodes for dye-sensitized solar cells

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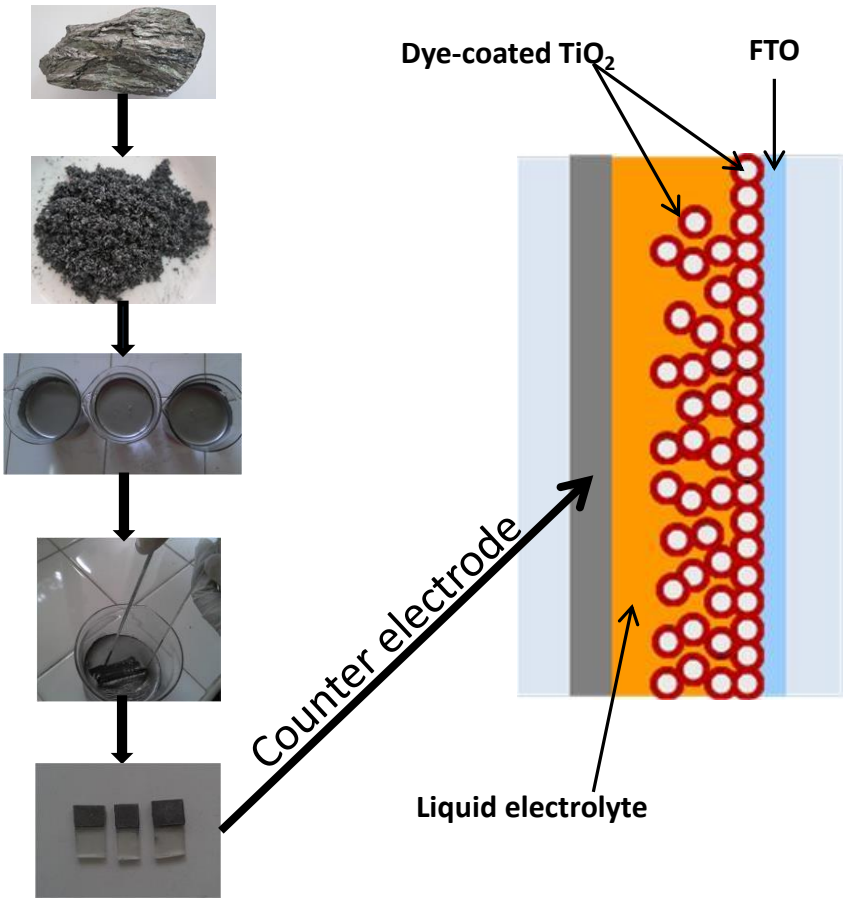
Graphical abstract



Highlights

- Purified Sri Lankan vein graphite has been used as counter electrode material in dye-sensitized solar cells (DSCs).
- We devised a novel technology for graphite enrichment in which the ball-milled Sri Lankan graphite (BMG) was floated in water.
- Ball-milled floated graphite (BMFG) was separated and both BMG and BMFG were extensively characterized for the first time.
- It has been found that the floating technology has increased the defect sites that act as catalytic sites for I_3^- reduction.
- It has been found that BMFG is a better counter electrode material than BMG for applications in DSCs.

ABSTRACT

This paper describes the use of ball-milled vein graphite and ball-milled floated graphite counter electrode (CE) materials in dye-sensitized solar cells. The vein graphite used was ball milled, sieved and fraction of