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[971] Photosynthetic vs Photovoltaic Efficiency of *Limnospira indica*, Perspective Cyanobacteria Strain for Space Mission Live Support Systems.

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Cyanobacteria play a vital role in carbon and nitrogen cycles via photosynthesis, making them significant subjects for investigating factors affecting light utilization efficiency. Photosynthetic microorganisms hold promise for sustainable energy conversion in photovoltaics. Previous studies have shown that applying an external electric field to microbial biofilms or cells enhances electron transfer and power generation efficiency. This study examines how cyanobacterial absorbance responds to electrical polarization. Light utilization efficiency of cyanobacteria was also evaluated utilizing Pulse Amplitude Modulation (PAM) fluorometry under influence of external polarization. This entailed monitoring cyanobacterial absorbance and measuring photocurrents under varying wavelengths of illumination utilizing the bioelectrode as either an anode or a cathode.

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