nismi di "perdita energetica" di un modulo FV: i) incidenza non perpendicolare della radiazione solare; ii) effetti spettrali; iii) effetti di basso irraggiamento; iv) effetti di temperatura. L'applicazione della sequenza ordinata dei quattro modelli trasforma l'efficienza nominale dei singoli moduli (STC) in quella prevista in condizioni operative reali (RRC). I dati meteoradiometrici per il sito di Ferrara, relativi al 2021, sono ricavati dalla banca dati DEXT3R di Arpae Emilia-Romagna. La scomposizione della radiazione globale su piano orizzontale è effettuata applicando diversi modelli (Liu-Jordan, Erbs, Reindl). L'energia erogata stimata è infine confrontata con quella estratta monitorando in tempo reale l'impianto FV.

The VASCOVID: A portable and non-invasive platform for the stratification of COVID-19 patients in ICU.

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COVID-19 pandemic dramatically challenged intensive care unit (ICU) departments all over the world. 5% of COVID-19 patients suffer from acute respiratory failure, often requiring treatments in the ICU. The European project VASCOVID aims to develop a real-time monitoring platform for the stratification and management of severe COVID-19 patients. It exploits non-invasive optical techniques, time-domain near-infrared spectroscopy and diffuse correlation spectroscopy to assess patients' endothelial health by measuring tissue oxygenation and perfusion during vascular occlusion tests (VOT). Indeed, endothelial function has been proved to be a suitable biomarker for the progression of COVID-19. We studied different VOT protocols on 19 healthy subjects to optimize the measurement settings, aiming at more reliable data. The thenar eminence's haemodynamic response to repeated VOTs has been recorded, placing the cuff in three different locations. A key finding was that the location of the cuff alters the results, and blood flow oscillations appear when end-point organs were measured, suggesting different muscles (*i.e.*, forearm) could provide better biomarker for COVID-19 stratification.

Detection of minor phenolic compounds in extra-virgin olive oils using vibrational spectroscopies.

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