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Sommario/riassunto	This work presents the development and application of high-speed fluorescent thermal imaging for quench analysis in high-temperature superconductors (HTS). Using a fluorescent coating, with a temperature-dependent light emission, temperature changes can be calculated over 2D surfaces. The technique uncovered peculiar transient effects in novel HTS tape architectures and also helped to verify and better understand hot spot development in both insulated and non-insulated, HTS–wound pancake coils.