

T H E  
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**ON THE COVER**



Variegated leaves display patterns of nongreen (white or yellow) sectors, which lack chlorophyll and/or various carotenoids, against the normally green background (two plants on the left column). *Arabidopsis immutans* mutants exhibit variegation due to a lesion in photosynthetic electron transport in the chloroplast. Rosso et al. (pages 3473–3492) report on the development of a nondestructive technique using false imaging (two plants on the right column) to investigate the role of photosynthetic redox balance in establishing patterns of leaf variegation in *immutans* mutants. Variegation in mutant seedlings develops through interactions between irradiance and temperature, which create imbalances in the photosynthetic energy budget, resulting in the destruction of green chloroplasts in colorless sectors. Mutations involving components of the photosynthetic electron transport chain predispose chloroplasts to photooxidation under high excitation pressure.

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