Table 1. Formulae and glossary of terms used by the JIP-test for the analysis of Chl *a* fluorescence transient OJIP emitted by dark-adapted photosynthetic samples.

Data extracted from the recorded fluorescence transient OJIP	
F_t	fluorescence at time t after onset of actinic illumination
$F_J \equiv F_{2ms}$	fluorescence intensity at the J-step (2 ms) of OJIP
$F_I \equiv F_{30ms}$	fluorescence intensity at the I-step (30 ms) of OJIP
F_P	maximal recorded fluorescence intensity, at the peak P of OJIP
Fluorescence parameters derived from the extracted data	
$F_0 \cong F_{50\mu s}$ or $\cong F_{20\mu s}$	minimal fluorescence (all PSII RCs are assumed to be open)
F_M (= F_P)	maximal fluorescence, when all PSII RCs are closed (equal to F_P when the actinic light intensity is above 500 μmol photons m^{-2} s^{-1} and provided that all RCs are active as Q_A reducing)
$F_\upsilon \equiv F_t - F_0$	variable fluorescence at time t
$F_V \equiv F_M - F_0$	maximal variable fluorescence
Phenomenological fluxes	
ABS/CS = Fo or ABS/CSM = FM	absorption per excited cross-section
TRo/CS = ΦPo·(ABS/CS)	trapping per excited cross-section
ETo/CS = ΦPo·Ψo·(ABS/CS)	electron transport per excited cross-section
Quantum yields and efficiencies	
$\varphi_{Pt} \equiv TR_t/ABS = [1-(F_t/F_M)] = \Delta F_t/F_M$	quantum yield for primary photochemistry at any time t, according to the general equation of Paillotin (1976)
$\varphi_{Po} \equiv TR_0/ABS = [1-(F_0/F_M)]$	maximum quantum yield for primary photochemistry
$\psi_{Eo} \equiv ET_0/TR_0 = (1-V_J)$	efficiency/probability for electron transport (ET), i.e. efficiency/probability that an electron moves further than Q_A^-
$\varphi_{Eo} \equiv ET_0/ABS = [1-(F_0/F_M)]\psi_{Eo}$	quantum yield for electron transport (ET)
$\delta_{Ro} \equiv RE_0/ET_0 = (1-V_I)/(1-V_J)$	efficiency/probability with which an electron from the intersystem electron carriers moves to reduce end electron acceptors at the PSI acceptor side (RE)
$\varphi_{Ro} \equiv RE_0/ABS = [1-(F_0/F_M)]\psi_{Eo}\,\delta_{Ro}$	quantum yield for reduction of end electron acceptors at the PSI acceptor side (RE)
$\gamma_{RC} = Chl_{RC}/Chl_{total} = RC/(ABS+RC)$	probability that a PSII Chl molecule functions as RC
$RC/ABS = \gamma_{RC}/(1-\gamma_{RC}) = \varphi_{Po}\,(V_J/M_0)$	Q_A-reducing RCs per PSII antenna Chl (reciprocal of ABS/RC)
Performance indexes *(products of terms expressing partial potentials at steps of energy bifurcations)*	
$PI_{ABS} \equiv \frac{\gamma_{RC}}{1-\gamma_{RC}} \cdot \frac{\varphi_{Po}}{1-\varphi_{Po}} \cdot \frac{\psi_o}{1-\psi_o}$	performance index (potential) for energy conservation from exciton to the reduction of intersystem electron acceptors
$PI_{total} \equiv PI_{ABS} \cdot \frac{\delta_{Ro}}{1-\delta_{Ro}}$	performance index (potential) for energy conservation from exciton to the reduction of PSI end acceptors