REFERENCES

Agati G. (1998), Response of the in vivo chlorophyll fluorescence spectrum to environmental factors and laser excitation wavelength. *Pure and Applied Optics* 7:797-807.

Agati G., Cerovic Z.G., and Moya I. (2000), The effect of decreasing temperature up to chilling values on the in vivo F685/F735 chlorophyll fluorescence ratio in *Phaseolus vulgaris* and *Pisum sativum*: The role of the Photosystem I contribution to the 735 nm fluorescence band. *Photochemistry and Photobiology* 72(1):75-84.

Allen E. (1964), Fluorescent white dyes: Calculation of fluorescence from reflectivity values. *Journal of the Optical Society of America* 54(4):506-515.

Allen W.A., and Richardson A.J. (1968), Interaction of light with a plant canopy. *Journal of the Optical Society of America* 58(8):1023-1028.

Allen W.A., Gausman H.W., Richardson A.J., and Thomas J.R. (1969), Interaction of isotropic light with a compact leaf. *Journal of the Optical Society of America* 59(10):1376-1379.

Allen W.A., Gausman H.W., and Richardson A.J. (1970), Mean effective constants of cotton leaves. *Journal of the Optical Society of America* 60(4):542-547.

Allen W.A. (1973), Transmission of isotropic light across a dielectric surface in two and three dimensions. *Journal of the Optical Society of America* 63(6):664-666.

Allen W.A., Gausman H.W., and Richardson A.J. (1973), Willstätter-Stoll theory of leaf reflectance evaluation by ray tracing. *Applied Optics* 12(10):2448-2453.

Anderson J.M., and Boardman N.K. (1966), Fractionation of the photochemical system of photosynthesis. I. Chlorophyll contents and photochemical activities of particles isolated from spinach chloroplasts. *Biochimica et Biophysica Acta* 112:403-421.

Andrieu B., Baret F., Schellberg J., and Rinderle U. (1988), Estimation de spectres de feuilles à partir de mesures dans des bandes spectrales larges, in *Proceedings of the 4th International Colloquium on Spectral Signatures in Remote Sensing*, Aussois (France), ESA SP-287, pp. 351-356.

Baranoski G.V.B., and Rokne J.G. (1997), An algorithmic reflectance and transmittance model for plant tissue. *Computer Graphics Forum* 16(3):141-150.

Baranoski G.V.G., and Rokne J.G. (1999), A non-deterministic reconstruction approach for isotropic reflectances and transmittances. *Journal of Visualization and Computer Animation* 10:225-231.

Baret F., Andrieu B., and Guyot G. (1988), A simple model for leaf optical properties in visible and near infrared: application to the analysis of spectral shifts determinism, in *Applications of Chlorophyll Fluorescence* (Lichtenthaler H.K., ed.), Kluwer Academic Publishers, pp. 345-351.

Baret F., and Fourty T. (1997), Estimation of leaf water content and specific leaf weight from reflectance and transmittance measurements. *Agronomie* 17(9-10):455-464.

Bassi R., and Simpson D. (1987), Chlorophyll-protein complexes of barley Photosystem I. *European Journal of Biochemistry* 163(2):221-230.

Benford F. (1946), Radiation in diffuse medium. *Journal of the Optical Society of America* 36(9):524-554.

Berthold D.A., Babcock G.T., and Yocum C.F. (1981), A highly resolved oxygen-evolving Photosystem II preparation from spinach thylakoids membranes. *FEBS Letter* 134:231-234

Boardman N.K., and Anderson J.M. (1964), Isolation from spinach chloroplasts of particles containing different proportions of chlorophyll a and b: their possible role in light reactions of photosynthesis. *Nature* 203:166-167.

Bonham J.S. (1986), Fluorescence and Kubelka-Munk theory. *Color Research and Applications* 11:223-230.

Brakke T.W., and Smith J.A. (1987), A ray tracing model for leaf bidirectional scattering studies, in *Proc. 7th Int. Geosci. and Remote Sens. Symp.* (IGARSS'87), Ann Arbor (MI), pp. 643-648.

Briantais J.M., Vernotte C., Krause G.H., and Weis E. (1986), Chlorophyll a fluorescence in higher plants: Chloroplasts and leaves, In *Light Emission by Plants and Bacteria* (Govindjee A.J. & Fork D.C., eds.), Academic Press, New York. pp. 539-583.

Bruggemann W. (1992), Low temperature limitations of photosynthesis in 3 tropical *Vigna* species – A chlorophyll fluorescence study. *Photosynthesis Research* 34(3):301-310.

Butler W.L., and Kitajima M. (1975), Energy transfer between PSII and PSI in chloroplasts. *Biochimica et Biophysica Acta* 396:72-85.

Butler W.L. (1978), Energy distribution in the photochemical apparatus of photosynthesis. *Annual Review of Plant Physiology* 29:345-378.

Camenen L., Goulas Y., Guyot G., Cerovic Z., Schmuck G., and Moya I. (1996), Estimation of the chlorophyll fluorescence lifetime of plant canopies: Validation of a deconvolution method based on the use of a 3-D canopy mockup, *Remote Sensing of Environment* 58:157-168.

Carter G.A., Theisen A.F., and Mitchell R.J. (1990), Chlorophyll fluorescence measured using the Fraunhofer line-depth principle and relationship to photosynthesis rate in the field. *Plant Cell and Environment* 13:79-83.

Carter G.A., Jones J.H., Mitchell R.J., and Brewer C.H. (1996), Detection of solar-excited chlorophyll a fluorescence and leaf photosynthetic capacity using a Fraunhofer Line Radiometer. *Remote Sensing of Environment* 55:89-92.

Cerovic Z.G., Samson G., Morales F., Tremblay N., and Moya I. (1999), Ultraviolet-induced fluorescence for plant monitoring: present state and prospects. *Agronomie* 19:543-578.

Chow W.S., Anderson J.A., and Hope A.B. (1988), Variable stoichiometries of photosystem II to photosystem I reaction centres. *Photosynthesis Research* 17:277-281.

Conel J.E., van den Bosch J., and Grove C.I. (1993), Application of a two-stream radiative transfer model for leaf lignin and cellulose concentrations from spectral reflectance measurements. Parts 1 & 2, in *Proceedings of the 4th Annual JPL Airborne Geoscience Workshop. Vol. 1. AVIRIS Workshop* (R.O. Green, Ed), 25-29 October 1993, Washington (DC), NASA-JPL Publication 93-26, pp. 39-51.

Croce R., Zucchelli G., Garlaschi F.M., Bassi R., and Jennings R.C. (1996), Excited state equilibration in the Photosystem I-Light-Harvesting I complex: P700 is almost isoenergetic with its antenna. *Biochemistry* 35:8572-8579.

Croce R., Dorra D., Holzwarth A.R., and Jennings R. (2000), Fluorescence decay and spectral evolution in intact Photosystem I of higher plants. *Biochemistry* 39:6341-6348.

Dahm D.J., and Dahm K.D. (1999), Representative layer theory for diffuse reflectance. *Applied Spectroscopy* 53(6):647-654.

D'Ambrosio N., Szabo K., and Lichtenthaler H.K. (1992), Increase of the chlorophyll fluorescence ratio F690/F735 during the autumnal chlorophyll breakdown. *Radiation and Environmental Biophysics* 31:31-62.

Davies J.A., and McKay D.C. (1989), Evaluation of selected models for estimating solar radiation on horizontal surfaces. *Solar Energy* 43:153-168.

Dawson T.P., Curran P.J., and Plummer S.E. (1998), LIBERTY - Modelling the effects of leaf biochemical concentration on reflectance spectra. *Remote Sensing of Environment* 65:50-60.

DeEll, J., and Toivonen, P.M.A. (eds). 2003. *Practical Applications of Chlorophyll Fluorescence in Plant Biology*, Kluwer.

Dijkstra P. (1990), Cause and effect of differences in specific leaf area. In *Causes and Consequences of Variation in Growth Rate and Productivity of Higher Plants* (H. Lambers, M.L. Cambridge, H. Konings, and T.L. Pons, eds). Academic Publishing, The Hague (The Netherlands), pp. 125-140.

Dunahay T.G., Staehelin L.A., Seibert M., Ogilvie P.D., and Berg S.P. (1984), Structural, biochemical and biophysical characterization of four oxygen-evolving photosystem II from spinach. *Biochimica et Biophysica Acta* 764:179-193.

Duysens L.N.M., Amesz J., and Kamp B.M. (1961), Two photochemical systems in photosystems. *Nature* 190:510.

Durkin A.J., Jaikumar S., Ramanujam N., and Richards-Kortum R.R. (1994), Relation between fluorescence spectra of dilute and turbid samples. *Applied Optics* 33(3):414-423.

Emerson R. (1958), Yield of photosynthesis from simultaneous illumination with pairs of wavelengths. *Science* 127(3305):1059-1060.

Emmel P. (1998), Modèle de prédiction couleur appliqué à l'impression jet d'encre, PhD thesis, Ecole Polytechnique Fédérale de Lausanne, Suisse, 186 pp.

Emmel P., and Hersch (1998), Spectral colour prediction model for a transparent fluorescent ink on paper, In *Proceedings of the IS&T/SID 6th Color Imaging Conference: Color Science, Systems and Applications*, November 17-20, 1998, Scottsdale (Arizona, USA), pp. 116-122.

Emmel P. (2000), Nouvelle formulation du modèle de Kubelka et Munk avec applications aux encres fluorescentes, In *Actes de l'Ecole de Printemps 2000 - Le Pays d'Apt en Couleurs*, 14-18 mars 2000, Apt et Roussillon (France), pp. 87-96.

Evain S., Camenen, L., Moya, I. (2001), Three channels detector for remote sensing of chlorophyll fluorescence and reflectance from vegetation, In *Proceedings of the 8th International Symposium: Physical Measurements and Signatures in Remote Sensing*, CNES, Aussois (France), M. Leroy (Ed.), pp 395-400.

Evain S. (2002), Télédétection passive de la fluorescence des couverts végétaux [PhD Thesis], Université de Paris-Sud. Orsay- France.

Evain S., Ounis A., Baret F., Goulas Y., Louis J., Ducruet J-M., Cerovic Z.G., and Moya I. (2002), Passive vegetation fluorosensing using atmospheric oxygen absorption bands, In Recent Advances in Quantitative Remote Sensing, 16-20 September 2002, Valencia (Spain), J. Sobrino (Ed.).

Evans J.R., and Anderson J.M. (1987), Absolute absorption and relative fluorescence excitation spectra of the five major chlorophyll-protein complexes from spinach chloroplasts from spinach thylakoid membranes. *Biochimica et Biophysica Acta* 892:75-82.

Flexas J., Briantais J.-M., Cerovic Z., Medrano H., and Moya I. (2000), Steady-state and maximum chlorophyll fluorescence responses to water stress in grapevine leaves: A new remote sensing system. *Remote Sensing of Environment* 73:283-297.

Flexas J., Escalona J.M., Evain S., Gulias J., Moya I., Osmond C.B., and Medrano H. (2002), Steady-state chlorophyll fluorescence (Fs) measurements as a tool to follow variations of net CO_2 assimilation and stomatal conductance during water-stress in C_3 plants. *Physiologia Plantarum* 114(2):231-240.

Fourty Th., Baret F., Jacquemoud S., Schmuck G., and Verdebout J. (1996), Optical properties of dry plant leaves with explicite description of their biochemical composition: direct and inverse problems. *Remote Sensing of Environment* 56(2):104-117.

Fourty T., and Baret F. (1998), On spectral estimates of fresh leaf biochemistry. *International Journal of Remote Sensing* 19(7):1283-1297.

Franck F., Juneau P., and Popovic R. (2002), Resolution of the photosystem I and photosystem II contributions to chlorophyll fluorescence of intact leaves at room temperature. *Biochimica et Biophysica Acta* 1556:239-246.

Freedman A., Cavender-Bares J., Kebabian P.L., Bhaskar R., Scott H., Bazzaz F.A. (2002), Remote sensing of solar-excited fluorescence as a measure of photosynthetic rate. *Photosynthetica* 40(1):127-132.

French C.S. (1971), The distribution and action in photosynthesis of several forms of chlorophyll. *Proceedings of the National Academy of Sciences of the United States of America* 68(11):2893-2897.

Fukshansky L., and Kazarinova N. (1980), Extension of the Kubelka-Munk theory of light propagation in intensely scattering materials to fluorescent media. *Journal of the Optical Society of America* 70(9):1101-1111.

Fukshansky L., Fukshansky-Kazarinova N., and von Remisowsky A.M. (1991), Estimation of optical parameters in a living tissue by solving the inverse problem of the multiflux radiative transfer. *Applied Optics* 30(22):3145-3153.

Gabrys-Mizera H. (1976), Model consideration of the light conditions in non-cylindrical plant cells. *Photochemistry and Photobiology* 24:453-461.

Ganapol B., Johnson L., Hammer P., Hlavka C., and Peterson D. (1998), LEAFMOD: a new within-leaf radiative transfer model. *Remote Sensing of Environment* 6:182-193.

Gardner C.M., Jacques S.L., and Welch A.J. (1996), Fluorescence spectroscopy of tissue: Recovery of intrinsic fluorescence from measured fluorescence. *Applied Optics* 35(10):1780-1792.

Gitelson A.A., Buschmann C., and Lichtenthaler H.K. (1998), Leaf chlorophyll fluorescence corrected for reabsorption by means of absorption and reflectance measurements. *Journal of Plant Physiology* 152:283-296.

Govaerts Y.M., Jacquemoud S., Verstraete M.M., and Ustin S.L. (1996), Three-dimensional radiation transfer modeling in a dicotyledon leaf. *Applied Optics* 35(33):6585-6598.

Govaerts Y.M., and Verstraete M.M. (1998), Raytran: A Monte Carlo ray-tracing model to compute light scattering in three-dimensional heterogeneous media. *IEEE Transactions on Geoscience and Remote Sensing* 36(2):493-505.

Govindjee, and Yang L. (1966), Structure of red fluorescence band in chloroplasts. *The Journal of General Physiology* 49:763-780.

Govindjee (1995), Sixty-three years since Kautsky: chlorophyll a fluorescence. *Australian Journal of Plant Physiology* 22:131-160.

Gronwall T.H. (1926), Reflection of radiation from a finite number of equally spaced parallel planes. *Physical Review* 27:277-285.
Gueymard C. (1987), An isotropic solar irradiance model for tilted surfaces and 1st comparison with selected engineering algorithms. *Solar Energy* 38(5):367-386.
Haberlandt G. (1914), Optical sense-organs, in *Physiological Plant Anatomy*, Macmillan and Co. (London), pp. 613-631.
Havaux M., and Gruszecki W.I. (1993), Heat-induced and light-induced chlorophyll-a fluorescence fluorescence changes in potato leaves containing high or low-levels of the carotenoid zeaxanthin – Indications of a regulatory effect of zeaxanthin on thylakoid membrane fluidity. *Photochemistry and Photobiology* 58:607-614.
Haworth P., Watson J.L., and Arntzen C.J. (1983), The detection, isolation and characterization of a light-harvesting complex, which is specifically associated with Photosystem I. *Biochimica et Biophysica Acta* 724:151-158.
Hill R., and Bendall F. (1960), Function of the two cytochrome components in chloroplasts: a working hypothesis. *Nature* 186:136-137.
Hosgood B., Jacquemoud S., Andreoli G., Verdebout J., Pedrini G., and Schmuck G. (1995), *Leaf Optical Properties EXperiment 93 (LOPEX93)*. European Commission, Joint Research Centre, Institute for Remote Sensing Applications, Report EUR 16095 EN.
Ikegami I., and Katoh S. (1975), Enrichment of photosystem I reaction center chlorophyll from spinach chloroplasts. *Biochimica et Biophysica Acta* 376(6):588-592.
Ikegami I (1976), Fluorescence changes related in the primary photochemical reaction in the P-700-enriched particles isolated from spinach chloroplasts. *Biochimica et Biophysica Acta* 449:245-258.
Jacquemoud S., and Baret F. (1990), PROSPECT: a model of leaf optical properties spectra. *Remote Sensing of Environment* 34:75-91.
Jacquemoud S. (1992), *Utilisation de la haute résolution spectrale pour l'étude des couverts végétaux : développement d'un modèle de réflectance spectrale*. PhD Thesis, University of Paris – Denis Diderot, Paris (France), 164 pp.
Jacquemoud S., Ustin S.L., Verdebout J., Schmuck G., Andreoli G., and Hosgood B. (1996), Estimating leaf biochemistry using the PROSPECT leaf optical properties model. *Remote Sensing of Environment* 56(3):194-202.
Jacquemoud S., Bacour C., Poilve H., and Frangi J.-P. (2000), Comparison of four radiative transfer models to simulate plant canopies reflectance–Direct and inverse mode. *Remote Sensing of Environment* 74:471-481.
Jacquemoud S. (2004), Leaf optical properties, in *Reflection Properties of Vegetation and Soil, with a BRDF Data base* (von Shönermark M., Geiger B. & Röser H.P., eds), Wissenshaft & Technik Verlag (Berlin), 352 pp.
Judd D.B. (1942), Fresnel reflection of diffusely incident light. *Journal of Research of the National Bureau of Standards* 29:329-332.
Kebabian P.L., Theisen A.F., Kallelis S., and Freedman A. (1999), A passive two-band sensor for sunlight-excited plant fluorescence. *Review of Scientific Instruments* 70:4386-4393.
Kim M.S., Chappelle E.W., Corp L., and McMurtrey III J.E. (1993), The contribution of chlorophyll fluorescence to the reflectance spectra of green vegetation. *In Proceedings of the International Geoscience and Remote Sensing Symposium* (IGARSS '93), Volume 3, pp. 1321-1224.
Knoetzel J., Svendsen I., and Simpson D.J. (1992), Identification of the photosystem I antenna polypeptides in barley. Isolation of the three pigment-binding antenna complexes. *European Journal of Biochemistry* 206:209-215.
Kok B. (1961), Partial purification and determination of oxidation reduction potential of the photosynthetic chlorophyll complex absorbing at 700 nm. *Biochimica et Biophysica Acta* 48:527-533.
Kortüm G. (1969), *Reflectance spectroscopy*, Springer, 366 pp.
Krause G.H., and Weis E. (1984), Chlorophyll fluorescence as a tool in plant physiology. II. Interpretation of fluorescence signals. *Photosynthesis Research* 5:139-157.
Krause G.H., and Weiss E. (1988), The photosynthetic apparatus and chlorophyll fluorescence: An introduction. In *Applications of Chlorophyll Fluorescence* (Lichtenthaler H.K., ed.), Kluwer Academic Publisher, pp. 3-11.

Krause G.H., and Weis E. (1991), Chlorophyll fluorescence and photosynthesis: the basis. *Annual Review of Plant Physiology and Plant Molecular Biology* 42:313-349.

Kumar R., and Silva L. (1973), Light ray tracing through a leaf cross section. *Applied Optics* 12(12):2950-2954.

Lang M., and Lichtenthaler H.K. (1991), Changes in the blue-green and red fluorescence-emission spectra of beech leaves during the autumnal chlorophyll breakdown. *Journal of Plant Physiology* 138:550-553.

Lavorel J. (1963), Indications d'ordre spectroscopique sur l'hétérogénéité de la chlorophylle *in vivo*. *Colloques Internationaux du Centre National de la Recherche Scientifique* 119:161-176.

Lichtenthaler H.K. (1987), Chlorophyll fluorescence signatures of leaves during the autumnal chlorophyll breakdown. *Journal of Plant Physiology* 131:101-110.

Lichtenthaler H.K., and Rinderle U. (1988), The role of chlorophyll fluorescence in the detection of stress conditions in plants. *CRC Critical Reviews in Analytical Chemistry* 19 (suppl):529-585.

Louis J. (2004), *Télédétection et modélisation des signaux de fluorescence et de réflectance (PRI) des couverts végétaux,* PhD in Molecular biophysics, University of Paris 7 (Paris), 201 pp.

Ma Q., Ishimaru A., Phu P., and Kuga Y. (1990), Transmission, reflection, and depolarization of an optical wave for a single leaf. *IEEE Transactions on Geoscience and Remote Sensing* 28(5):865-872.

Maier S.W., Lüdeker W., and Günther K.P. (1999), SLOP: A revised version of the stochastic model for leaf optical properties. *Remote Sensing of Environment* 68(3):273-280.

Maier S.W. (2000), Modeling the Radiative Transfer in Leaves in the 300 nm to 2.5 µm Wavelength Region taking into Consideration Chlorophyll Fluorescence - The Leaf Model SLOPE. PhD Thesis - Technische Universität München (München), 124 pages.

Melamed M.T. (1963), Optical properties of powders. Part I. Optical absorption coefficients and the absolute value of the diffuse reflectance. *Journal of Applied Physics* 34:560–570.

Meroni M., (2004), High resolution leaf spectral signature for the detection of solar induced chlorophyll fluorescence, 2nd International Workshop on Remote Sensing of Vegetation Fluorescence, 17-19 Nov. 2004, Montreal, Canada.

Meziane D., and Shipley B. (1999), Interacting determinants of specific leaf area in 22 herbaceous species: effects of irradiance and nutrient availability. *Plant Cell and Environment* 22(5):447-459.

Mineucchi K., Takahashi K., Komatsu A., and Tatsumota H. (1999), Seasonal variation of laser induced fluorescence spectra in tree leaves. *Environmental Technology* 20:633-638.

Mohammed G.H., Binder W.D., and Gillies S.L. (1995), Chlorophyll fluorescence: A review of its practical forestry applications and instrumentation. *Scandinavian Journal of Forest Research* 10:383-410.

Mohammed G.H., Zarco-Tejada P., and Miller J.R. 2003, Applications of chlorophyll fluorescence in forestry and ecophysiology, chapter 3, in *Practical Applications of Chlorophyll Fluorescence in Plant Biology* (J.R. DeEll, ed), Kluwer, pp.79-124.

Moya I., Guyot G., and Goulas Y. (1992), Remotely sensed blue and red fluorescence emission for monitoring vegetation, *ISPRS International Society of Photogrammetry and Remote Sensing* 47:205-231.

Moya I., Camenen L., Latouche G., Mauxion C., Evain S., and Cerovic Z.G. (1998), An instrument for the measurement of sunlight excited plant fluorescence, in *Photosynthesis: Mechanisms and Effects* (G. Gorab, ed.), Kluwer Acad. Pub., Dordrecht, pp. 4265-4270.

Moya I., Camenen L., Evain S., Goulas Y., Cerovic Z.G., Latouche G., Flexas J., and Ounis A. (2004), A new instrument for passive remote sensing. 1. Measurements of sunlight-induced chlorophyll fluorescence. *Remote Sensing of Environment* 91:186-197.

Mukerji I., and Sauer K. (1993), Energy Transfer Dynamics of an Isolated Light Harvesting Complex of Photosystem I from Spinach: Time-resolved Fluorescence Measurements at 295K and 77K. *Biochimica et Biophysica Acta* 1142:311-320.

Mullet J.E., Burke J.J., and Arntzen J. (1980a), Chlorophyll proteins of photosystem I. *Plant Physiology* 65:814-822.

Mullet J.E., Burke J.J., and Arntzen J. (1980b), A developmental study of Photosystem I peripheral chlorophyll proteins. *Plant Physiology* 65:823-827.

Murakami A. (1997), Quantitative analysis of 77K fluorescence emission spectra in Synechocystis sp. PCC 6714 and *Chlamydomonas reinhardtii* with variable PS I / PS II stoichiometries. *Photosynthesis Research* 53:141-148.

Murata N., Nishimura M., and Takamiya A. (1966), Fluorescence of chlorophyll in photosynthetic systems III. Emission bands of chlorophyll a and the energy transfer between two pigment systems. *Biochimica et Biophysica Acta* 126:234-243.

Ogawa T., Obata F., and Shibata K. (1966), Two pigment proteins in spinach chloroplasts. *Biochimica et Biophysica Acta* 112:223-234.

Ogawa T., and Vernon L.P. (1970), Properties of partially purified photosynthetic reaction centers from *Scenedesmus* mutant 6E and *Anabaena variabilis* grown in the presence of diphenylamine. *Biochimica et Biophysica Acta* 197(2):292-301.

Olf H.G. (1988), Stokes's pile of plates revisited. *Journal of the Optical Society of America A* 5(10):1620-1625.

Olioso A., Méthy M., and Lacaze B. (1992), Simulation of canopy fluorescence as a function of canopy structure and leaf fluorescence, *Remote Sensing of Environment*, 41:239-247.

Ounis A. (2001), Télédétection de la fluorescence des couverts végétaux induite par laser: Application des techniques de corrélation temporelle microseconde et nanoseconde [Ph.D. thesis], Université de Paris-Sud.

Ounis A, Cerovic ZG, Briantais J-M, and Moya I (2001), Dual excitation FLIDAR for the estimation of epidermal UV absorption in leaves and canopies. *Remote Sensing of Environment* 76:33-48.

Panou-Diamandi O., Uzunoglu N.K., Zacharakis G., Filippidis G., Papazoglou T., and Koutsouris D. (1998), A one layer tissue fluorescence model based on electromagnetic theory. *Journal of Electromagnetic Waves & Applications* 12(8):1101-1121.

Papageorgiou G. (1975), Chlorophyll fluorescence: an intrinsic probe of photosynthesis, in Bioenergetics of Photosynthesis (Govindjee, ed), Academic Press, New York.

Perez R., Seals R., Ineichen P., Stewart R., and Minicucci D. (1987), A new simplified version of the Perez diffuse irradiance model for tilted surfaces. *Solar Energy* 39(3):221-231.

Peterson R.B., Oja V., and Laisk A. (2001), Chlorophyll fluorescence at 680 and 730 nm and leaf photosynthesis. *Photosynthesis Research* 70:185-196.

Pfündel, E. (1998), Estimating the contribution of photosystem I to total leaf chlorophyll fluorescence. *Photosynthesis Research* 56:185-195.

Plascyk J.A. (1975), The MK II Fraunhofer line discriminator (FLD-II) for airborne and orbital remote sensing of solar-stimulated luminescence. *Optical Engineering* 14(4):339-346.

Prakash J.S.S., Baig M.A., Bhagwat A.S., and Mohanty P. (2003), Characterisation of senescence-induced changes in light harvesting complex II and photosystem I complex of thylakoids of *Cucumis sativus* cotyledons: Age induced association of LHCII with Photosystem I . *Journal of Plant Physiology* 160:175-184.

von Remisowsky A.M., McClendon J.H., and Fukshansky L. (1992), Estimation of the optical parameters and light gradients in leaves: Multi-flux *versus* two-flux treatment. *Photochemistry and Photobiology* 55(6):857-865.

Richards-Kortum R., Rava R.P., Fitzmaurice M., Tong L.L., Ratliff N.B., Kramer J.R., and Feld M.S. (1989), A one-layer model of laser-induced fluorescence for diagnosis of disease in human tissue: Applications to atherosclerosis. *IEEE Transactions on Biomedical Engineering*. 36(12):1222-1232.

Richter T., and Fukshansky L. (1996), Optics of a bifacial leaf: 1. A novel combined procedure for deriving the optical parameters. *Photochemistry and photobiology*. 63(4):507-516.

Roelofs T.A., Lee C.H., and Holzwarth A.R. (1992), A new approach to the characterization of the primary processes in photosystem II alpha- and beta-units. *Biophysical Journal*. 61:1147-1163.

Rosema A., Verhoef W., Schroote J., and Snel J.F.H. (1991), Simulating fluorescence light-canopy interaction in support of laser-induced fluorescence measurements. *Remote Sensing of Environment*. 37:117-130.

Rosema A., Snel J.F.H., Zahn H., Buurmeijer W.F., and Van Hove L.W.A. (1998), The relation between laser-induced chlorophyll fluorescence and photosynthesis. *Remote Sensing of Environment* 65:143-154.

Sane P.V., and Park R.B. (1970), Purification of photosystem I reaction centers from spinach stroma lamella. *Biochemical & Biophysical Research Communication* 41:206-210.

Schanda R. (1986), *Physical Fundamentals of Remote Sensing*, Springer Verlag, 187 pp.

Schmuck G., and Moya I. (1994), Time-resolved chlorophyll fluorescence spectra of intact leaves. *Remote Sensing of Environment* 47(1):72-76.
Schreiber U., Bilger U., and Neubauer C. (1994), Chlorophyll fluorescence as a non-intrusive indicator for rapid assessment of in vivo photosynthesis. *Ecological Studies* 100: 49-70.
Shakespeare T., and Shakespeare J. (2003), A fluorescent extension to the Kubelka-Munk model. *Color Research and Applications* 28(1):4-14.
Shipley B., and Vu T.-H. (2002), Dry mater content as a measure of dry matter concentration in plants and their parts. *New Phytologist* 153:359-364.
Srivastava A., Greppin H., and Strasser R.J. (1995), The steady state chlorophyll *a* fluorescence exhibits *in vivo* an optimum as a function of light intensity which reflects the physiological state of the plant. *Plant Cell Physiology* 36(5):839-848.
Stern F. (1964), Transmission of isotropic radiation across an interface between two dielectrics. *Applied Optics* 3(1):111-113.
Stokes G.G. (1862), On the intensity of the light reflected from or transmitted through a pile of plates. *Proceedings of the Royal Society of London (Series B)* 11:545-556.
Strasser R.J., and Butler W.L. (1977), Fluorescence emission spectra of photosystem I, photosystem II and the light-harvesting chlorophyll a/b complex of higher plants. *Biochimica et Biophysica Acta* 462:307-313.
Subhash N., and Mohanan C.N. (1997), Curve-fit analysis of chlorophyll fluorescence spectra: Application to nutrient stress detection in sunflower. *Remote Sensing of Environment* 60:347-356.
Taiz L., and Zeiger, E. (1998), Plant Physiology, *Second Edition Sinauer Associates*: Sunderland, Massachusetts, 792 pp.
Terjung F. (1998), Reabsorption of chlorophyll fluorescence and its effects on the spectral distribution and the picosecond decay of higher plant leaves. *Zeitschrift für Naturforschung* C53: 924-926.
Theisen A.F., Rock B.N., and Eckert R.T. (1994), Detection of changes in steady-state chlorophyll fluorescence in *Pinus strobus* following short-term ozone exposure. *Journal of Plant Physiology* 144:410-419.
Trissl H.W., Hecks B., and Wulf K. (1993), Invariable trapping times in photosystem I upon excitation of minor long-wavelength-absorbing pigments. *Photochemistry and Photobiology* 57(1):108-112.
Tucker C.J., and Garratt M.W. (1977), Leaf optical properties as a stochastic process. *Applied Optics* 16(3):635-642.
Tuckerman L.B. (1947), On the intensity of the light reflected from or transmitted through a pile of plates. *Journal of the Optical Society of America* 37(10):818-825.
Ustin S.L., Jacquemoud S., and Govaerts Y.M. (2001), Simulation of photon transport in a three-dimensional leaf: Implication for photosynthesis. *Plant Cell and Environment* 24:1095-1103.
Ustin S.L., Jacquemoud S., Zarco-Tejada P.J., and Asner G.P. (2004), Remote sensing of the environment: state of the science and new directions, in *Manual of Remote Sensing. Volume 4: Remote Sensing for Natural Resource Management and Environmental Monitoring* (S.L. Ustin, ed), John Wiley & Sons, 848 pp.
Valentini R., Cecchi G., Mazzinghi P., Mugnozza G.S., Agati G., Bazzani M., Angelis P. de, Fusi F., Matteucci G., Raimondi V., and Scarascia-Mugnozza G. (1994), Remote sensing of chlorophyll a fluorescence of vegetation canopies: 2. Physiological significance of fluorescence signal in response to environmental stresses. *Remote Sensing of Environment* 47:29-35.
Van Dorssen R.J., Plijter J.J., Dekker J.P., Den Ouden A., Amesz J., and Van Gorkom H.J. (1987), Spectroscopic properties of chloroplast grana membranes and of the core of photosystem II. *Biochimica et Biophysica Acta* 809:134-143.
Verhoef W. (1984), Light-scattering by leaf layers with application to canopy reflectance modeling – the SAIL model. *Remote Sensing of Environment* 16(2):125-141.
Verhoef W. (1998), Theory of radiative transfer models applied in optical remote sensing of vegetation canopies, PhD Thesis, Wageningen Agricultural University, 310 pp.
Vernon L.P., Shaw E.R., and Ke B. (1966), A photochemically active particle derived from chloroplasts by the action of the detergent Triton X-100. *The Journal of Biological Chemistry* 241(17):4101-4109.
Welch A.J., Gardner C., Richards-Kortum R., Chan E., Criswell G., Pfefer J., and Warren S. (1997), Propagation of fluorescent light. *Lasers in Surgery and Medicine* 21:166-178.

Wessels J.S.C. (1966), Isolation of a chloroplast fragment fraction with NADPH+-photoreducing activity dependent on plastocyanin and independent cytochrome f . *Biochimica et Biophysica Acta* 126:581-583.

Wong D., and Govindjee (1979), Antagonistic effects of mono-and divalent cations on polarization of chlorophyll fluorescence in thylakoids and changes in excitation energy transfer. *FEBS Letters* 97:373-379.

Wu J., Feld M.S., and Rava R.P. (1993), Analytical model for extracting intrinsic fluorescence in turbid media. *Applied Optics*. 32(19):3585-3595.

Yamada N., and Fujimura S. (1991), Nondestructive measurement of chlorophyll pigment content in plant leaves from three-color reflectance and transmittance. *Applied Optics* 30(27):3964-3973.

Yamamoto Y., and Ke B. (1980), Regulation of excitation energy distribution in photosystem-II fragments by magnesium ions. *Biochimica et Biophysica Acta* 592: 296-302.

Yeh P. (1988), *Optical waves in layered media*. John Wiley & Sons, 406 pp.

Zarco-Tejada P.J., Miller J.R., Mohammed G.H., Noland T.L. (2000a), Chlorophyll fluorescence effects on vegetation apparent reflectance: I. Leaf-level measurements and model simulation. *Remote Sensing of Environment* 74(3):582-595.

Zarco-Tejada P.J., Miller J.R., Mohammed G.H., Noland T.L., and Sampson P.H. (2000b), Chlorophyll fluorescence effects on vegetation apparent reflectance: II. Laboratory and airborne canopy-level measurements with hyperspectral data. *Remote Sensing of Environment* 74(3):596-608.

Zarco-Tejada P.J., Miller J.R., Mohammed G.H., Noland T.L., and Sampson P.H. (2001), Estimation of chlorophyll fluorescence under natural illumination from hyperspectral data. *International Journal of Applied Earth Observation and Geoinformation*, Special Issue on Applications of Imaging Spectroscopy, 3:321-327.

Zarco-Tejada P.J., Pushnik J.C., Dobrowski S., and Ustin S.L. (2003), Steady-state Chlorophyll a fluorescence detection from canopy derivative reflectance and double-peak effects. *Remote Sensing of Environment* 84:283-294.

Zucchelli G., Jennings R.C., and Garlaschi F.M. (1992), Independent fluorescence emission of the chlorophyll spectral forms in higher plant photosystem II. *Biochimica et Biophysica Acta* 1099:163-169.