***Columns of compiled dataset:***

* "Dataset ID", "Dataset Name", "Site ID", "Sample date", "English Name", "Latin Name", "PFT", "Latitude", "Longitude", "Chla+b", "Ccar", "EWT", "LMA", "Foreoptic type", "Instruments", "Reference", "Link to original dataset", "DOI".
* Reflectance ranging from 450 – 2400 nm.
* Chla+b: Chlorophyll\_a+b (µg/cm²);
* Ccar: Carotenoid (µg/cm²);
* EWT: Equivalent Water Thickness (g/m²);
* LMA: Leaf mass per area (g/m²);

***Source of original datasets used for compiling the dataset in the study***

1. Lopex93:

* <http://opticleaf.ipgp.fr/index.php?page=database>
* <https://data.ecosis.org/dataset/leaf-optical-properties-experiment-database--lopex93->
* <https://ecosis.org/package/13aef0ce-dd6f-4b35-91d9-28932e506c41>

1. Angers:

* <http://opticleaf.ipgp.fr/index.php?page=database>
* <https://data.ecosis.org/dataset/angers-leaf-optical-properties-database--2003->
* <https://ecosis.org/package/2231d4f6-981e-4408-bf23-1b2b303f475e>

1. Leaf trait and spectra seasonality—MV:

* <https://doi.org/10.1016/j.rse.2016.03.026>
* <https://github.com/geoxiyang/LeafTraitSpectraSeasonality-Yangetal2016RSE>

1. Leaf trait and spectra seasonality—HF:

* <https://doi.org/10.1016/j.rse.2016.03.026>
* <https://github.com/geoxiyang/LeafTraitSpectraSeasonality-Yangetal2016RSE>

1. 2018 Cedar Creek pressed leaves:

* <https://data.ecosis.org/dataset/2018-cedar-creek-pressed-leaves>
* <https://ecosis.org/package/e384a3ed-9778-49b9-8f84-5c86170b3ea4>
* article: <https://www.biorxiv.org/content/10.1101/2021.04.21.440856v5>
* Reflectance, C, N, fresh mass, dry mass, LDMC, area, LMA, EWT, 332 measurements.

1. Fresh-leaf CABO spectra from herbarium project:

* <https://data.ecosis.org/dataset/fresh-leaf-cabo-spectra-from-herbarium-project>
* <https://ecosis.org/package/8616e1c6-e06c-42a8-9e86-883749a1c315>
* article: <https://www.biorxiv.org/content/10.1101/2021.04.21.440856v5>
* Reflectance, 609 measurements; SLA; LDMC; LMA; EWT; N; C; NDF; ADF; ADL; solubles; hemicellulose; cellulose; lignin; chlA; chlB; car; Al; B; B.1; Ca; Cu; Fe; Mg; Mn; Na; P; Zn; N\_area; C\_area; solubles\_area; hemicellulose\_area; cellulose\_area; lignin\_area; chlA\_area; chlB\_area; car\_area; Al\_area; Ca\_area ; Cu\_area; Fe\_area; K\_area; Mg\_area; Mn\_area; Na\_area; P\_area; Zn\_area.

1. Fresh Leaf Spectra to Estimate Foliar Functional Traits across NEON domains:

* <https://data.ecosis.org/dataset/fresh-leaf-spectra-to-estimate-foliar-functional-traits-across-neon-domains>
* <https://ecosis.org/package/f72dd538-8350-4d45-ab93-617f3c1da6f0>
* Reflectance, 499 measurements, Cab, Car.

1. Seasonal fresh leaf spectra and traits, Blackhawk Island, WI:

* <https://data.ecosis.org/dataset/seasonal-fresh-leaf-spectra-and-traits--blackhawk-island--wi>
* <https://ecosis.org/package/31e2a7ee-09b6-42ee-b206-bcb19d367dff>
* <https://doi.org/10.1016/j.rse.2022.113023>

1. Leaf reflectance and traits of floating and emergent macrophytes:

* <https://data.ecosis.org/dataset/leaf-reflectance-and-tratis-of-floating-and-emergent-macrophytes>
* <https://ecosis.org/package/4af0577a-5254-4b89-a501-d79203ec91ce>

1. Seasonal measurements of photosynthesis and leaf traits in scarlet oak:

* <https://data.ecosis.org/dataset/seasonal-measurements-of-photosynthesis-and-leaf-traits-in-scarlet-oak>
* <https://ecosis.org/package/50b4415a-4773-409c-9a31-bcb068c07f36>
* <https://doi.org/10.1093/treephys/tpab015>

1. Leaf and canopy spectroscopy and biochemical data of field-grown Cucurbita pepo under two stresses:

* <https://data.ecosis.org/dataset/leaf-and-canopy-spectroscopy-and-biochemical-data-of-field-grown-cucurbita-pepo-under-two-stresses>
* <https://ecosis.org/package/563709f2-37c1-4b8d-b577-bf6c5cf63a94>

1. NGEE Tropics GLiHT Puerto Rico Campaign Leaf Spectral Reflectance and Transmittance March 2017:

* <https://data.ecosis.org/dataset/ngee-tropics-gliht-puerto-rico-campaign-leaf-spectral-reflectance-and-transmittance-march-2017>
* <https://ecosis.org/package/7b5fd8dc-fa19-4fc0-8435-58acff826e9d>

1. NGEE Tropics February 2017 Leaf Spectral Reflectance Measured in Panama at the PA-SLZ Canopy Crane:

* <https://data.ecosis.org/dataset/ngee-tropics-february-2017-leaf-spectral-reflectance-measured-in-panama-at-the-pa-slz-canopy-crane>
* <https://ecosis.org/package/c4ce128e-7984-4325-8e8d-e8d54b3f783e>

1. NGEE Tropics Leaf Spectral Reflectance Measured in Panama Collected February to April 2016:

* <https://data.ecosis.org/dataset/ngee-tropics-leaf-spectral-reflectance-measured-in-panama-collected-february-to-april-2016>
* <https://ecosis.org/package/22dc6b53-5d4a-45c6-9d02-000d0f0ec5a0>

1. NASA FFT Project Leaf Reflectance Morphology and Biochemistry for Northern Temperate Forests:

* <https://data.ecosis.org/dataset/nasa-fft-project-leaf-reflectance-morphology-and-biochemistry-for-northern-temperate-forests>
* <https://ecosis.org/package/fea0294d-2d39-4576-aab5-7200fdc87068>
* <https://doi.org/10.1111/nph.16123>

1. 2018 Talladega National Forest: Leaf level Reflectance Spectra and Foliar Traits:

* <https://data.ecosis.org/dataset/2018-talladega-national-forest--leaf-level-reflectance-spectra-and-foliar-traits>
* <https://ecosis.org/package/2408f75d-18a7-4915-8494-69afe50e0611>

1. NGEE Arctic 2019 Leaf Spectral Reflectance Seward Peninsula Alaska:

* <https://data.ecosis.org/dataset/ngee-arctic-2019-leaf-spectral-reflectance-seward-peninsula-alaska>
* <https://ecosis.org/package/dd3d1e06-9411-4b7a-a3bb-99657e6e9a0c>

1. NGEE Arctic 2017 Leaf Spectral Reflectance Teller Watershed Seward Peninsula Alaska:

* <https://data.ecosis.org/dataset/ngee-arctic-2017-leaf-spectral-reflectance-teller-watershed-seward-peninsula-alaska>
* <https://ecosis.org/package/b64174d0-c426-4e90-b9ed-c3afdcb8bb73>

1. Leaf spectra and physiological and chemical traits from maize grown under nitrogen stress:

* <https://data.ecosis.org/dataset/leaf-spectra-and-physiological-and-chemical-traits-from-maize-grown-under-nitrogen-stress>
* <https://ecosis.org/package/219e5799-34b2-4d70-a70d-585242c9f998>
* https://doi.org/10.1186/s13007-019-0450-8

1. NGEE Arctic Leaf Spectral Reflectance Utqiagvik (Barrow) Alaska 2013

* <https://data.ecosis.org/dataset/ngee-arctic-leaf-spectral-reflectance-utqiagvik--barrow--alaska-2013>
* <https://ecosis.org/package/224c23b4-9e85-4275-b5f4-308db02547b3>

1. NGEE Arctic 2016 Leaf Spectral Reflectance Kougarok Road Watershed Seward Peninsula Alaska:

* <https://data.ecosis.org/dataset/ngee-arctic-2016-leaf-spectral-reflectance-kougarok-road-watershed-seward-peninsula-alaska>
* <https://ecosis.org/package/960dbb0c-144e-4563-8117-9e23d14f4aa9>

1. Leaf spectra of 36 species growing in Rosa rugosa invaded coastal grassland communities in Belgium:

* <https://data.ecosis.org/dataset/leaf-spectra-of-36-species-growing-in-rosa-rugosa-invaded-coastal-grassland-communities-in-belgium>
* <https://ecosis.org/package/9db4c5a2-7eac-4e1e-8859-009233648e89>

1. Leaf level spectra and LMA for a set of trees, forbs, vines and grasses collected in Madison, WI:

* <https://data.ecosis.org/dataset/leaf-level-spectra-and-lma-for-a-set-of-trees--forbs--vines-and-grasses-collected-in-madison--wi>
* <https://ecosis.org/package/7433af7d-fbbd-4617-8df4-4d892f0d4357>

1. Fresh Leaf Spectra to Estimate Foliar Functional Traits over NEON domains in eastern United States:

* <https://data.ecosis.org/dataset/fresh-leaf-spectra-to-estimate-foliar-functional-traits-over-neon-domains-in-eastern-united-states>
* <https://ecosis.org/package/5cff97db-1e27-4f42-bf0e-dd787bc00bc9>

1. Fresh Leaf Spectra to Estimate LMA over NEON domains in eastern United States:

* <https://data.ecosis.org/dataset/fresh-leaf-spectra-to-estimate-lma-over-neon-domains-in-eastern-united-states>
* <https://ecosis.org/package/5617da17-c925-49fb-b395-45a51291bd2d>

1. 2012-leaf-reflectance-spectra-of-tropical-trees-in-tapajos-national-forest:

* <https://data.ecosis.org/dataset/2012-leaf-reflectance-spectra-of-tropical-trees-in-tapajos-national-forest>
* <https://ecosis.org/package/fa9163f1-425b-4890-b343-f07f63e37bc3>
* <https://doi.org/10.1111/nph.14051>

1. 2014-leaf-reflectance-spectra-of-tropical-plants-growing-in-biosphere2:

* <https://data.ecosis.org/dataset/2014-leaf-reflectance-spectra-of-tropical-plants-growing-in-biosphere2>
* <https://ecosis.org/package/6a5ee8bb-87f5-4cf6-bb91-0b7602186347>

1. Leaf spectra, structural and biochemical leaf traits of eight crop species

* <https://data.ecosis.org/dataset/leaf-spectra--structural-and-biochemical-leaf-traits-of-eight-crop-species>
* <https://ecosis.org/package/25770ad9-d47c-428b-bf99-d1543a4b0ec9>

1. Dried Leaf Spectra to Estimate Leaf Morphology and Biochemistry for Northern Temperate Forests:

* <https://data.ecosis.org/dataset/dried-leaf-spectra-to-estimate-leaf-morphology-and-biochemistry-for-northern-temperate-forests>
* <https://ecosis.org/package/2b7563b9-7aab-46bd-b1a9-4fdae45305a2>
* <https://doi-org.ezproxy.library.wisc.edu/10.1890/13-2110.1>

1. Productivity and Characterization of Soybean Foliar Traits Under Aphid Pressure:

* <https://data.ecosis.org/dataset/productivity-and-characterization-of-soybean-foliar-traits-under-aphid-pressure>
* <https://ecosis.org/package/cdbb6b09-b481-4022-a0da-ad95a8b085d8>

1. Common Milkweed Leaf Responses to Water Stress and Elevated Temperature:

* <https://data.ecosis.org/dataset/common-milkweed-leaf-responses-to-water-stress-and-elevated-temperature>
* <https://ecosis.org/package/9425d5b2-7633-45b5-9c07-6ec3323499a0>

1. Fresh leaf spectra to estimate leaf N concentration and leaf mass per area in two vegetable crops:

* <https://data.ecosis.org/dataset/fresh-leaf-spectra-to-estimate-leaf-n-concentration-and-leaf-mass-per-area-in-two-vegetable-crops>
* <https://ecosis.org/package/5b6b29b8-2250-4c24-a3ff-74366acca75a>

1. Fresh Leaf VSWIR Spectra to Estimate Leaf Traits for California Ecosystems:

* <https://data.ecosis.org/dataset/fresh-leaf-vswir-spectra-to-estimate-leaf-traits-for-california-ecosystems>
* <https://ecosis.org/package/0fadcc45-f79e-4fd3-a6ca-8afaf26ae299>

1. 2014 Cedar Creek ESR Grassland Biodiversity Experiment: Leaf-level Contact Data: Trait Predictions:

* <https://data.ecosis.org/dataset/2014-cedar-creek-esr-grassland-biodiversity-experiment--leaf-level-contact-data--trait-predictions>
* <https://ecosis.org/package/acbe2150-2fa7-467c-bd56-889ba7284d00>

1. Predicting leaf traits of temperate broadleaf deciduous trees from hyperspectral reflectance: can a general model be applied across a growing season?

* <https://doi.org/10.1016/j.rse.2021.112767>
* <https://figshare.com/articles/dataset/Raw_leaf_trait_and_spectral_data/16909330/1>

1. Estimation of six leaf traits of East Asian forest tree species by leaf spectroscopy and partial least square regression.

* <https://doi.org/10.1016/j.rse.2019.111381>

1. Leaf reflectance plant functional gradient IFGG/KIT

* <https://data.ecosis.org/dataset/leaf-reflectance-plant-functional-gradient-ifgg-kit>
* <https://ecosis.org/package/leaf-reflectance-plant-functional-gradient-ifgg-kit>