Ready-to-go line

leXsolar **PV** Ready-to-go

Item-No. 1105

With this fully equipped experiment system, you can conduct photovoltaic experiments without any additional accessories and completely independently of location. The sturdy case contains all the measuring devices, cables, thermometers, and other additional equipment needed for the experiments.

leXsolar **Wind** Ready-to-go

Item-No. 1405

Like leXsolar-Wind Large, this system leaves no questions unanswered about the physical principles of wind energy use. leXsolar- Wind Ready-to-go is also suitable for use in internal company training courses and for demonstration purposes in sales.

leXsolar **H_2** Ready-to-go 3.0

Item-No. 1224

leXsolar-H_2 Ready-to-go 3.0 offers the entire range of current fuel cell technology for teaching purposes. The product has been completely redesigned and now includes the latest types of fuel cells. With a solar module, electrolyzer, and fuel cell, a solar hydrogen cycle can be set up and studied.

leXsolar **ThermalEnergy** Ready-to-go

Item-No. 1304

This experimental system allows various technologies for solar thermal energy conversion to be used in schools and further education. The product not only includes various solar collector systems that can be operated with or without a pump, but also CSP (concentrated solar power) technology and a Peltier element for direct electrical energy conversion.

leXsolar **EMobility** Ready-to-go

Item-No. 1803

This product teaches the physical and technical fundamentals of battery and storage technology. With eight different battery types, such as lithium polymer batteries, capacitors, and fuel cells, properties such as service life and charging methods can be investigated on a laboratory scale. Qualitative and quantitative experiments are used to analyze the characteristics of different battery types.

leXsolar **SmartGrid** Ready-to-go

Item-No. 1605

leXsolar-SmartGrid Ready-to-go enables the construction of a smart grid with various renewable energy sources on a laboratory scale. A key issue is the stability of the power grids. Practical experiments highlight the challenges involved in integrating photovoltaic or wind power systems into the grid. At the same time, students learn about ways of stabilizing the grid.

leXsolar **BioFuel** Ready-to-go

Item-No. 1703

The entire process of biofuel production is illustrated in an interdisciplinary manner using leXsolar BioFuel Ready-to-go and student experiments. The case is equipped with all the necessary components, allowing experimentation to take place anywhere..

leXsolar **BioEnergy** Ready-to-go

Item-No. 1710

The comprehensive leXsolar-BioEnergy Ready-to-go experimental system allows the biomass cycle to be simulated without the need for additional accessories.
Plant growth is observed in a propagation box and hydroponics, and water and nutrient consumption is examined during the various growth phases.

Ready-to-go line

leXsolar **ESave** Ready-to-go

Item-No. 1504

This product makes the topic of energy tangible. The approach is holistic: students first explore topics such as global energy consumption, climate change, and energy consumption in the home. They then measure the room temperature and climate, water consumption, and energy consumption at their own school, depending on the topic.

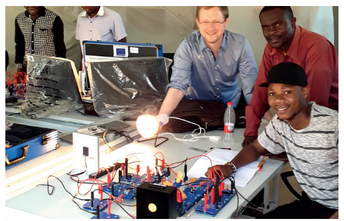
leXsolar **NewEnergy** Ready-to-go

Item-No. 2003

With leXsolar-NewEnergy Ready-to-go, you and your students can conduct high-quality, quantitative experiments with excellent educational value on topics such as photovoltaics, wind and water power, electromobility, energy storage, and fuel cells in elementary and middle school.

International projects and education Partners

Together with SEDAYU Solar, Indonesia's leading solar energy provider, we are accelerating the transition to a green economy.



EU education support program in Malawi.

Education partners with whom we support various educational institutions and inspire children, pupils, and students to take an interest in renewable energies.

Contact:

leXsolar GmbH
Strehlener Str. 12-14
01069 Dresden
Germany

Phone: +49 351 47 96 56 0
E-mail: info@lexsolar.de
Web: www.leXsolar.de

Products for **schools** and **educational projects**

understanding new energies · neue energien verstehen · capire le nuove energie
comprendre les ènergies renouvelables · entendiendo las energías renovables
Изучаем альтернативную энергию · 领会新能源 · فهم الطاقات المتجددة

leXsolar **areas of expertise**

leXsolar-NewEnergy World
Experiment with photovoltaics, wind- and hydropower, electromobility, energy storage and fuel cells and learn to understand renewable energies.

leXsolar-PV
Photovoltaic (PV) is the direct conversion of light into electricity through solar cells.

leXsolar-Wind
Wind power currently has the largest share of the renewable energy production.

leXsolar-H_2
Fuel cells can convert hydrogen (H_2) into electricity – one possible solution to the storage problem of renewable energies.

leXsolar-BioFuel
Bio fuels can easily be stored and replace fossil fuels in transportation.

leXsolar-ThermalEnergy
Solar thermal technologies can not only be used to heat energy. Concentrated solar thermal energy can also generate electricity!

leXsolar-EMobility
The use of storage technologies is a requirement for a sustainable energy revolution.

leXsolar-SmartGrid
The term SmartGrid stands for the connection and control of energy producers, stores and consumers into an „intelligent power grid".

leXsolar-ESave
Energy efficiency and energy saving are core elements for the creation of a renewable energy supply.

leXsolar-Hydropower
Hydropower was the first renewable energy source that was used by man and is subject to few fluctuations.

leXsolar-SmartControl
Measure, operate, control via USB, wirelessly or just manually. The highlight is the completely platform independent software.

leXsolar-Academy
Connecting you with the knowledge to deal with all the energy technologies and makes you a highly-qualified contact for students and colleagues.

leXsolar-BioEnergy
Discover how biomass can be grown and the energetic use of different degradation processes. Experience the whole biomass cycle!

leXsolar **lines**

Secondary levels I & II

leXsolar **Large** products

Secondary education prepares students for both university studies and vocational training. To meet this requirement, you can use the products in the leXsolar Large series to carry out practical experiments and tests on the scientific principles of renewable energies. The products are primarily designed for quantitative school experiments and focus in particular on the physical fundamentals of the respective renewable energies. Additional equipment already available at the school, such as multimeters, cables, etc., is not included.

Secondary levels I & II

leXsolar **Ready-to-go** products

Take advantage of our Ready-to-go series!

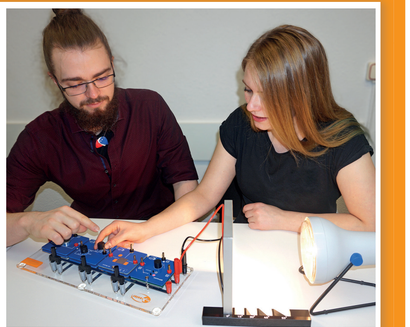
Designed for secondary schools, these sturdy aluminum cases contain all the necessary accessories, such as cables and measuring devices, and are ready for use at any time. This allows you to experiment with your students on all leXsolar topics related to renewable energies, both in school and outside of school.

Technical education

leXsolar **Professional** and **Expert** products

Specialized teaching systems for technical training at universities of applied sciences and vocational schools are available for the subject areas leXsolar-PV, leXsolar-Wind, leXsolar-EMobility, leXsolar-ThermalEnergy, leXsolar-H_2, and leXsolar-SmartGrid.

Further information on the products and technical training systems can be found in our technical training catalog.



Large line

leXsolar **PV** Large

Item-No. 1103

The combination of school physics with photovoltaic applications is what makes leXsolar-PV Large so special. It is the only photovoltaic experiment system in the world to have received the Worlddidac Award for its high educational quality.
The experiments carried out with leXsolar-PV Large leave no questions unanswered about the physical principles of photovoltaic technology.

leXsolar **Wind** Large

Item-No. 1404

leXsolar-Wind Large uses curriculum-based experiments to teach students how wind turbines work. For example, they can investigate the influence of wind speed and direction or the type of rotor. For grades 5–7, the experiments can be carried out phenomenologically using simple consumers such as incandescent bulbs or horns; for physics lessons up to grade 13, they can also be carried out completely quantitatively.

leXsolar **H_2** Large

Item-No. 1218

This product has been completely redesigned and now includes the latest types of fuel cells. Together with the already established PEM fuel cell and the components of a complete solar hydrogen cycle (electrolyzer, PEM fuel cell, and solar module), this product is probably the most comprehensive fuel cell experiment system on the education market.

leXsolar **EMobility** Large

Item-No. 1802

With this product, students learn about the physical and technical fundamentals and applications of various battery technologies. An electric model car is used to explore the highly topical subject of electromobility in a practical way. The dimensioning and application of different battery types are covered, as are service life and charging methods. Qualitative and quantitative experiments can be used to analyze the characteristics of different battery types.

leXsolar **BioFuel** Large

Item-No. 1702

The entire process of biofuel production is illustrated in an interdisciplinary manner using leXsolar BioFuel-Large in school experiments.
It begins with the biological sub-step of raw material selection and fermentation. The resulting mash is then distilled using the specially developed leXsolar cooler and the ethanol obtained is characterized. The final step is to convert the biofuel produced into usable energy—e.g., electrical energy—using the supplied equipment.

leXsolar **BioFuel** Supplement

Item-No. 1704

With this accessory set, you can set up a BioFuel experiment anywhere. The accompanying tripod rods and various clamps make setting up the distillation apparatus intuitive. A plastic box with insert is included for storing the components.