



robogonio BSRF (picture: opsira)

gonio BSRF fixture (picture: opsira)

robogonio BSRF – The module for quick spectrally resolved scatter light measurement for robot goniophotometers

Current developments in photonics use new materials to combine light conversion and light scattering. High power density, small dimensions and the mutual influence of conversion and scattering make a simulation of light conversion and light scattering impossible. Spectrally resolved scattered light measurements are a crucial prerequisite for the development of even more efficient light sources.

The standard measurement method for determining the BSRF (bidirectional scattering distribution function) / BRDF (bidirectional reflectance distribution function) is goniophotometry. The sample is mounted on a specimen fixture. Lighting and a detector are positioned relatively around the sample. Scattered light goniophotometers have a complex and expensive setup and are slow. In the project, a new, fast and cost-effective solution for scattered light measurement was developed. Thus, a new module is added to the proven opsira robotic goniophotometer (robogonio) to enable fast and cost-effective spectrally resolved scattered light measurements.



The robogonio is a very versatile system to realize the relative solid angles and distances between the DUT (luminaire, lamp) and the detector system required for photometric measurements in a very wide range.

The aim of the project was to develop an additional module for the robogonio, which realizes the need of at least 2 more axes without an additional device, but as an additional "claw" attached to the robogonio.

The new robogonio BSDF will be presented during the next **Light+Building Trade Show from October 2nd to 6th, 2022 in Frankfurt/Main in Germany, opsira Stand F70 – Hall 8.0.**
<https://www.opsira.de/en/light-building-2022/>

The project is sponsored by:

- Bundesministerium für Wirtschaft und Klimaschutz aufgrund eines Beschlusses des Deutschen Bundestages (Federal Ministry of Economics and Climate Protection based on a resolution of the German Bundestag).

Press contact

Uta Vocke
opsira GmbH
Leibnizstraße 20
88250 Weingarten
Phone: +49 751 561 890
Email: vocke@opsira.de
www.opsira.de

opsira GmbH

Your partner for perfect light

For 20 years, opsira has been accompanying customers in the field of optical system technology – from the concept to the prototype ready for serial production. opsira established as full-service provider including the design of optical systems, the development of customized optical measurement systems as well as high-tech products in the fields of photometry, spectrometry and goniometry. opsira's in-house lightlabs measure optical characteristics of products and components to ensure high quality of luminaires and light sources.

The opsira goniophotometer robogonio combines near-field, extremely fast far-field, and spectral measurement in one single, highly flexible system.

opsira focuses on general lighting, automotive, signal and medical lighting.

Please find all press information for download here: <https://www.opsira.de/en/downloads/press/>

Please find pictures here: <https://www.opsira.de/downloads-login/press/>

opsira GmbH
Leibnizstraße 20
88250 Weingarten / Germany
Phone +49 751 561 890
info@opsira.de
www.opsira.de

Südwestbank Ravensburg
IBAN DE78 6009 0700 0828 0090 07
BIC SWBSD333
Landesbank Baden-Württemberg
IBAN DE04 6005 0101 0004 5030 15
BIC SOLADE33

Geschäftsführung
General Managers
Volker Schumacher
Jürgen P. Weißhaar
HRB 552042 AG Ulm
VAT DE201444158

