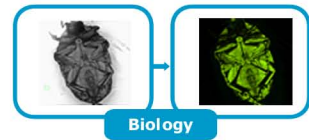
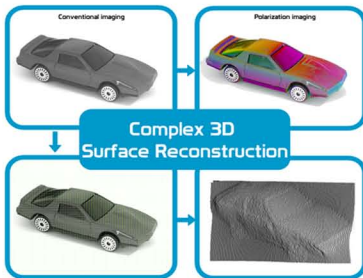
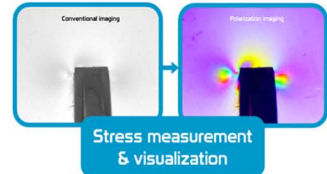


SALSA

FULL Stokes Polarization camera



PERFORMS:

Live full Stokes polarization imaging in the visible in passive or active configuration
Live computation of any derived polarization parameter: DOP, DOLP, DOCP, AOP, Ellipticity.
Passive and Active polarization imaging

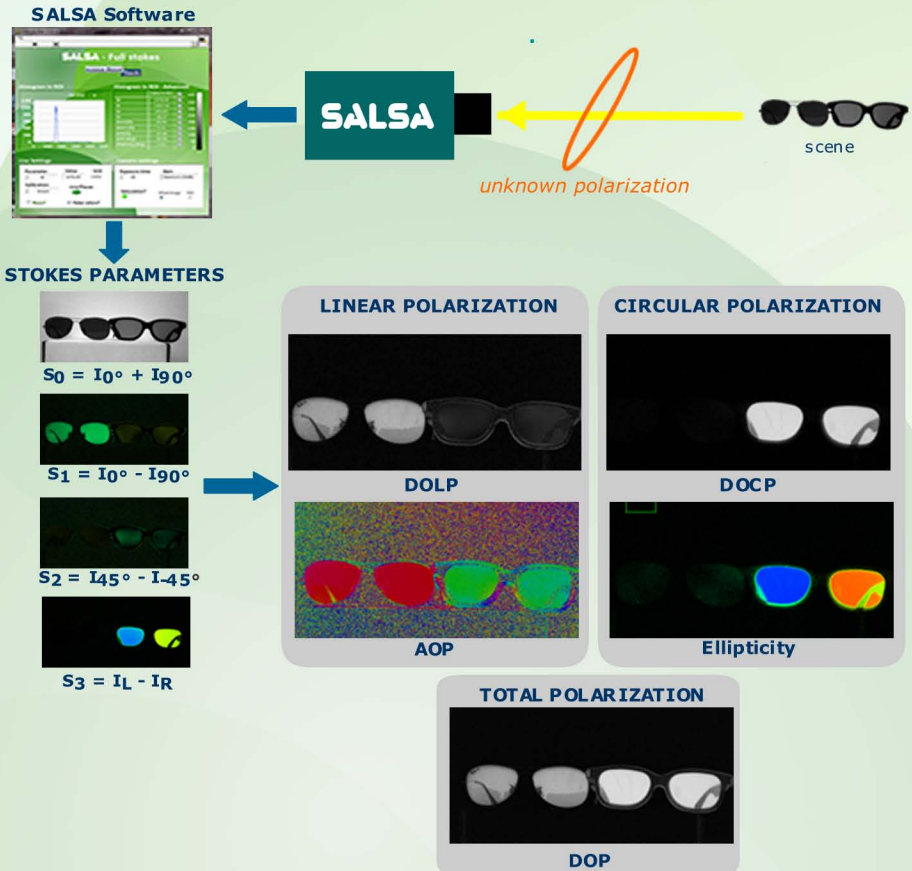
ENABLES:

Retardance mapping / Stress measurement
Stokes/Mueller imagery
Contrast enhancement
Target detection/identification

OVERVIEW

Along with the intensity and the spectrum, the polarization of light carries abundant information. The Stokes formalism allows for complete description of any partial or total polarization state. While most of the available polarization imaging cameras perform only linear Stokes polarization imaging (only the linear polarization can be quantified), SALSA performs live measurement of the full Stokes vector for each pixel of the image at a video frame rate. Many polarization-related parameters can be visualized in real time such as the Stokes parameters (S_0 , S_1 , S_2 , S_3), the Degree Of Polarization (Linear or Circular), the Angle Of Polarization, the Ellipticity angle, etc.

PRINCIPLE



This example shows two pairs of glasses.
Left ones are linearly polarized sunglasses;
right ones are circularly polarized 3D-movies glasses.

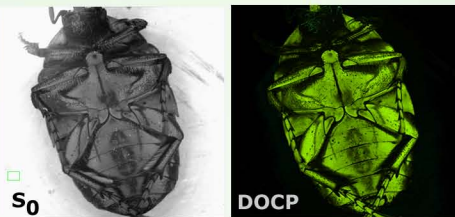
SOFTWARE

A user-friendly software allows a Full Stokes polarization analysis for each pixel of the image, in real time. The user can select a Region Of Interest and visualize all polarization data in live or in analysis mode, save images and record polarization movies.

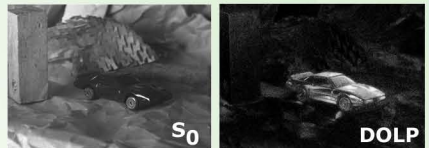
Parameter	Value in ROI	Scale
S0	1574.45	4095
S1	-1457.25	3500
S2	472.87	2500
S3	58.17	2000
DOLP (%)	97.49	1500
DOCP (%)	3.71	1000
DOP (%)	97.58	500
AOP (deg)	80.98	0
Ellipticity (deg)	2.12	0

APPLICATIONS

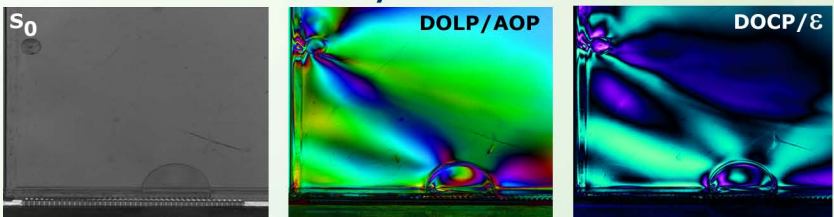
BIOLOGY



TARGET DETECTION



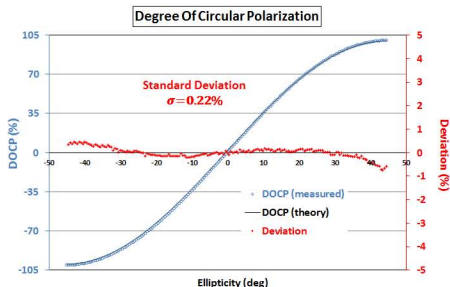
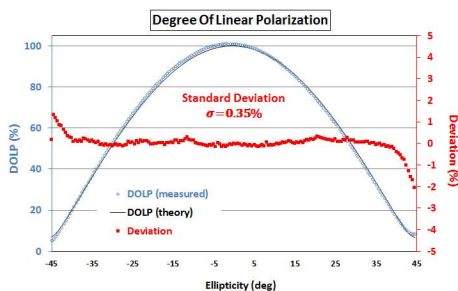
RETARDANCE/STRESS MAPPING



GENERAL SPECIFICATIONS

Camera Size	3.2"x3.2"x4" (80mmx80mmx100mm)
Video Format	Digital GigE
Resolution (pixels)	782x582 to 1,040x1,040
Frame Rate at maximum resolution	35 raw frames / second 8 polarization frames/second
Digitalization	12 bits
Sync. Interface	USB
Spectral Bandwidth	400 nm - 750 nm
Calibration	Factory calibrated
Lens Mount	C-mount
Software	SALSA 2.0

SALSA camera is factory calibrated. The typical Standard Deviation for Degree Of Linear Polarization is 0.35% and for Degree Of Circular Polarization is 0.22% n-key system including hardware and computer with dedicated software.



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Bossa Nova Tech

Bossa Nova Technologies
606 Venice Blvd - Suite B
Venice, CA 90291
USA

Phone: (310) 577-8113
Fax: (310) 943-3280
www.bossanovatech.com
info@bossanovatech.com