



2015 TOKYO



MCS 2015



LED-BASED GONIO-HYPERSPECTRAL SYSTEM FOR THE ANALYSIS OF AUTOMOTIVE PAINTINGS

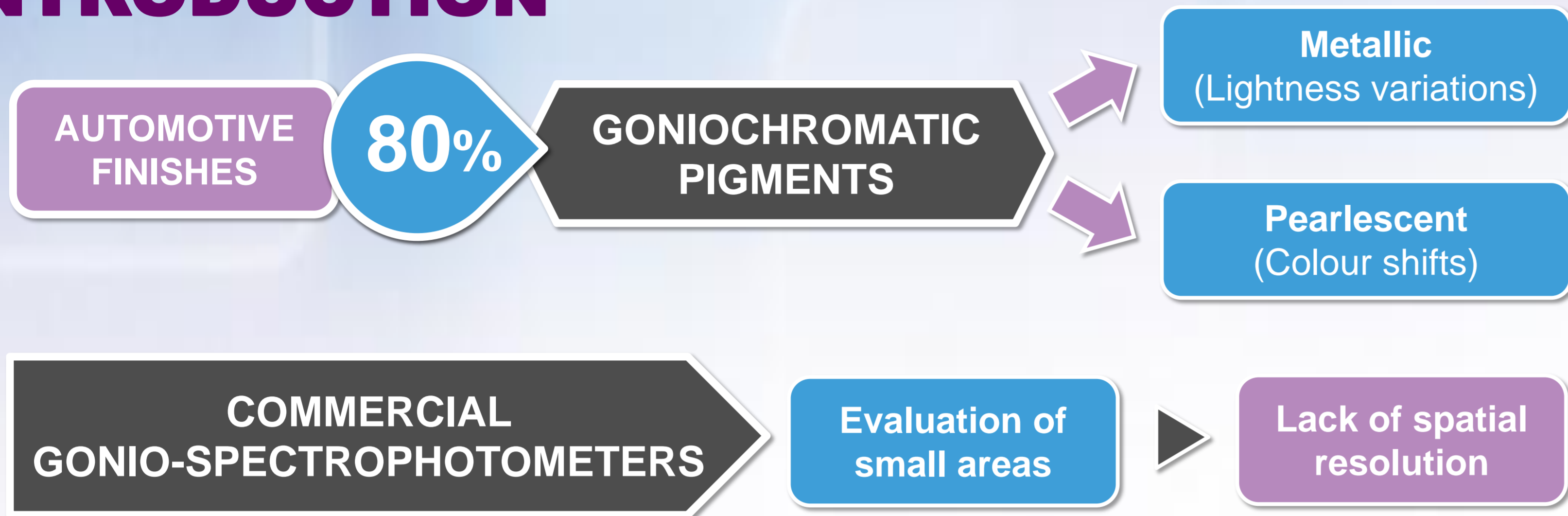
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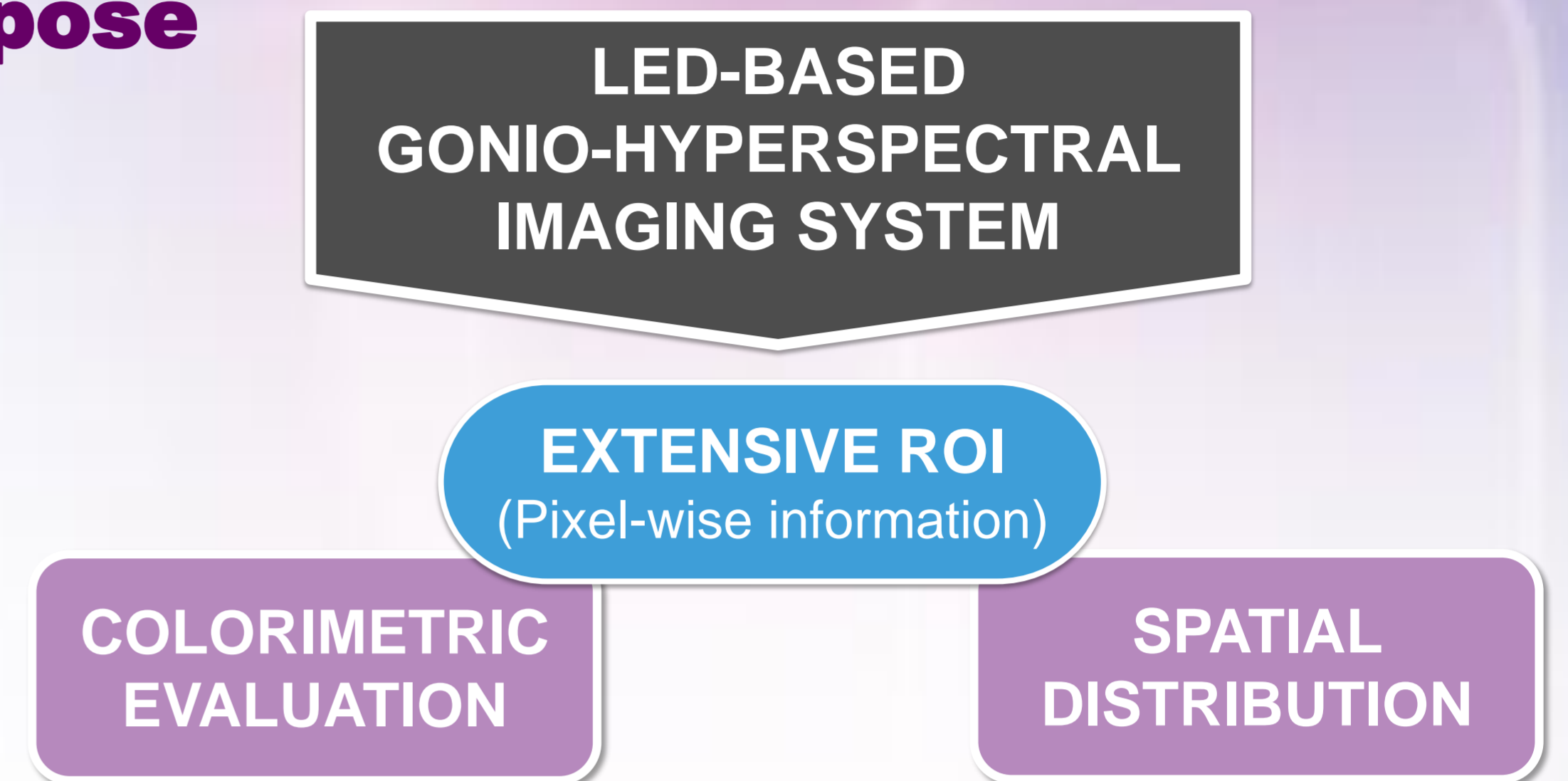
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INTRODUCTION

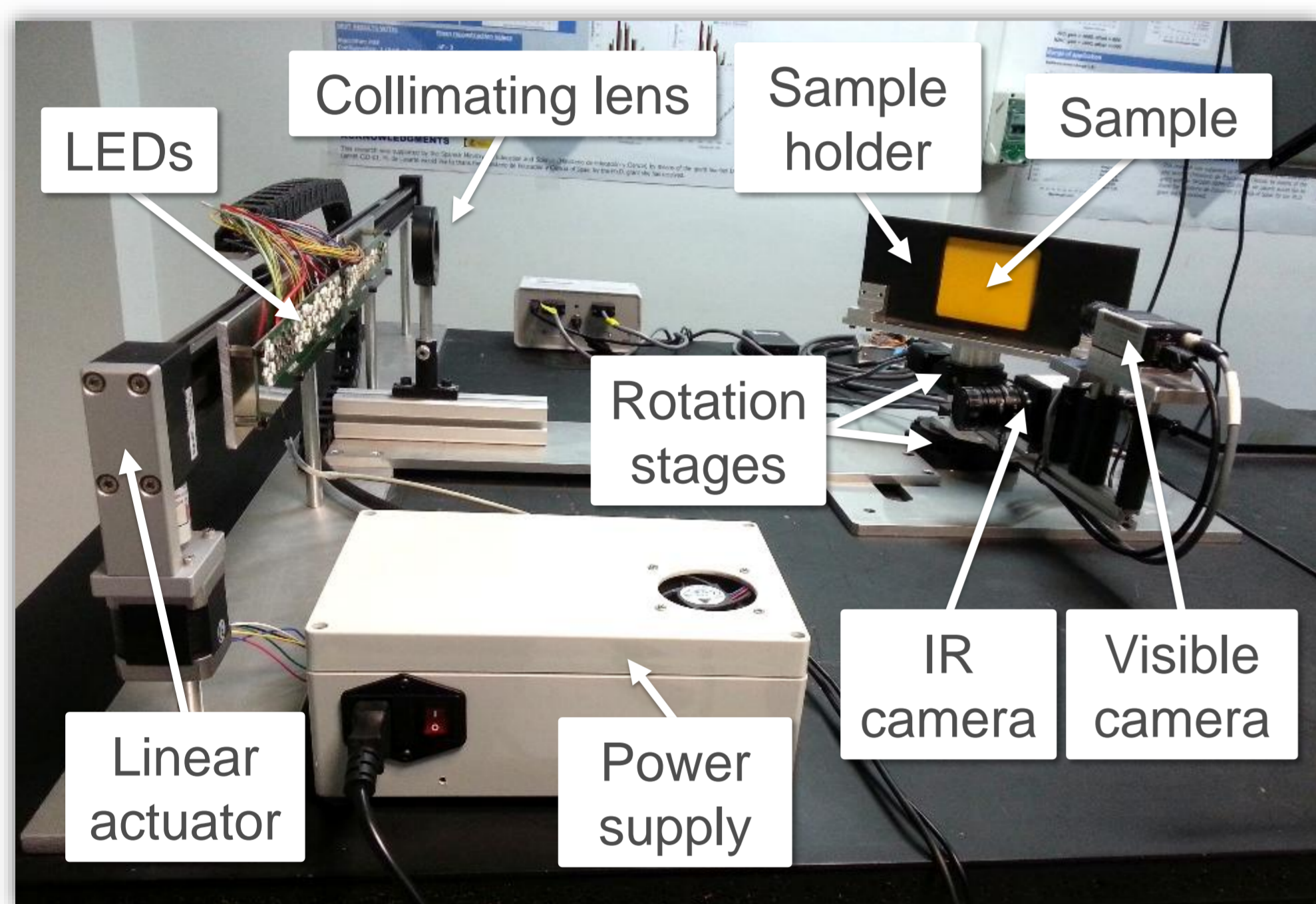


Purpose

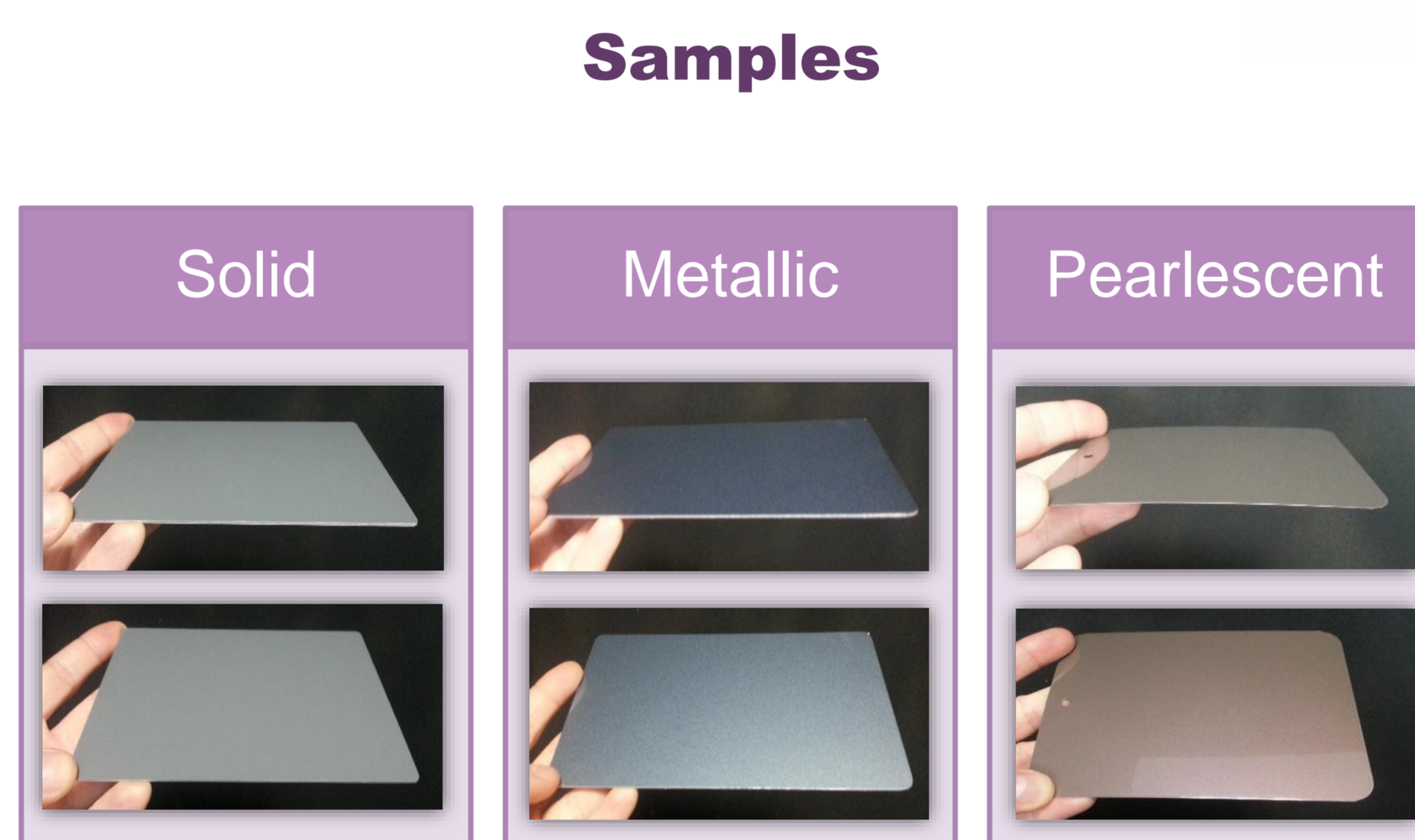


METHOD

Setup



Experimental Procedure



Measurement geometries

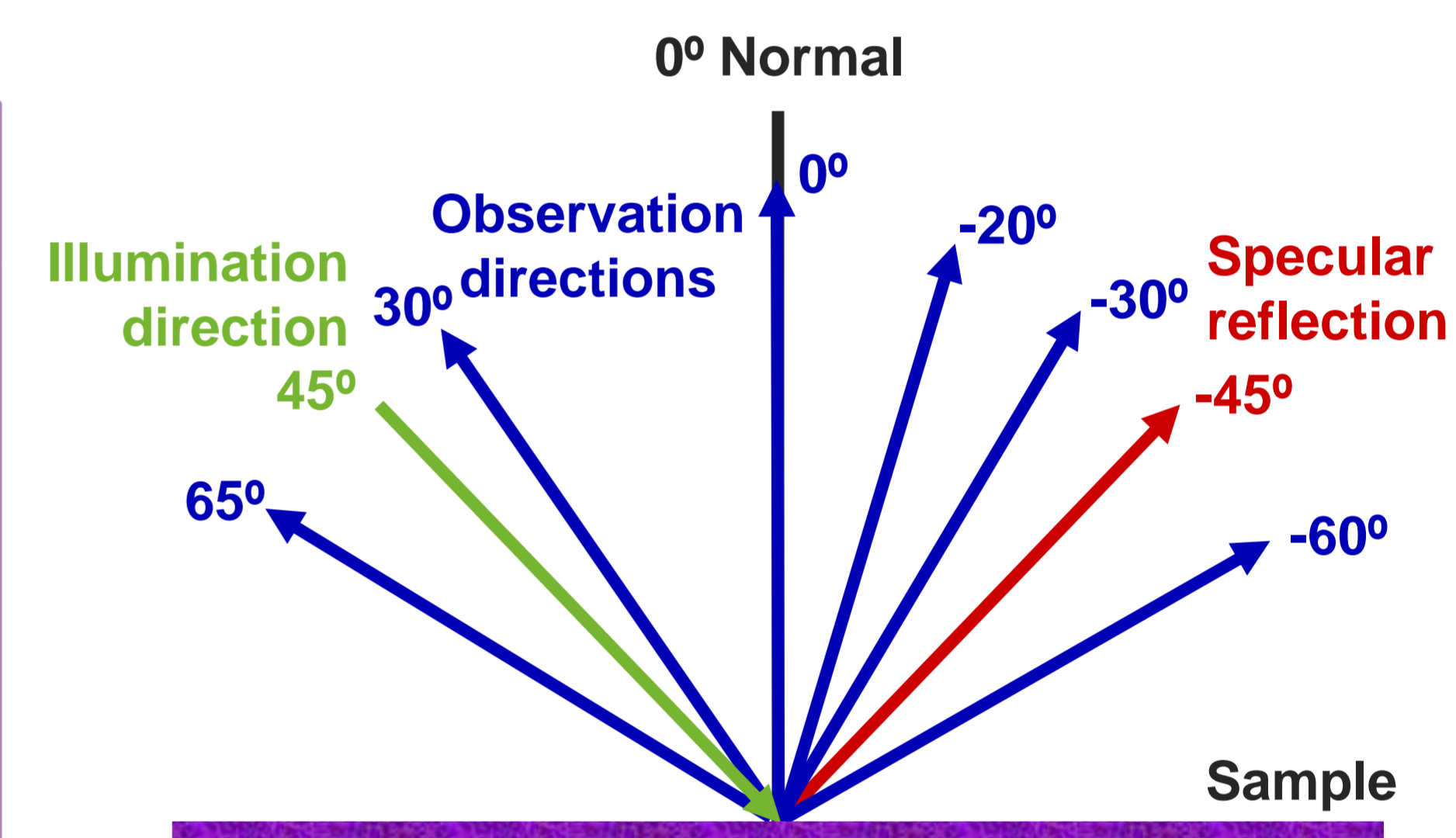


Image and Colour Analysis



X-Rite MA98®



BYK-Mac®



ΔE

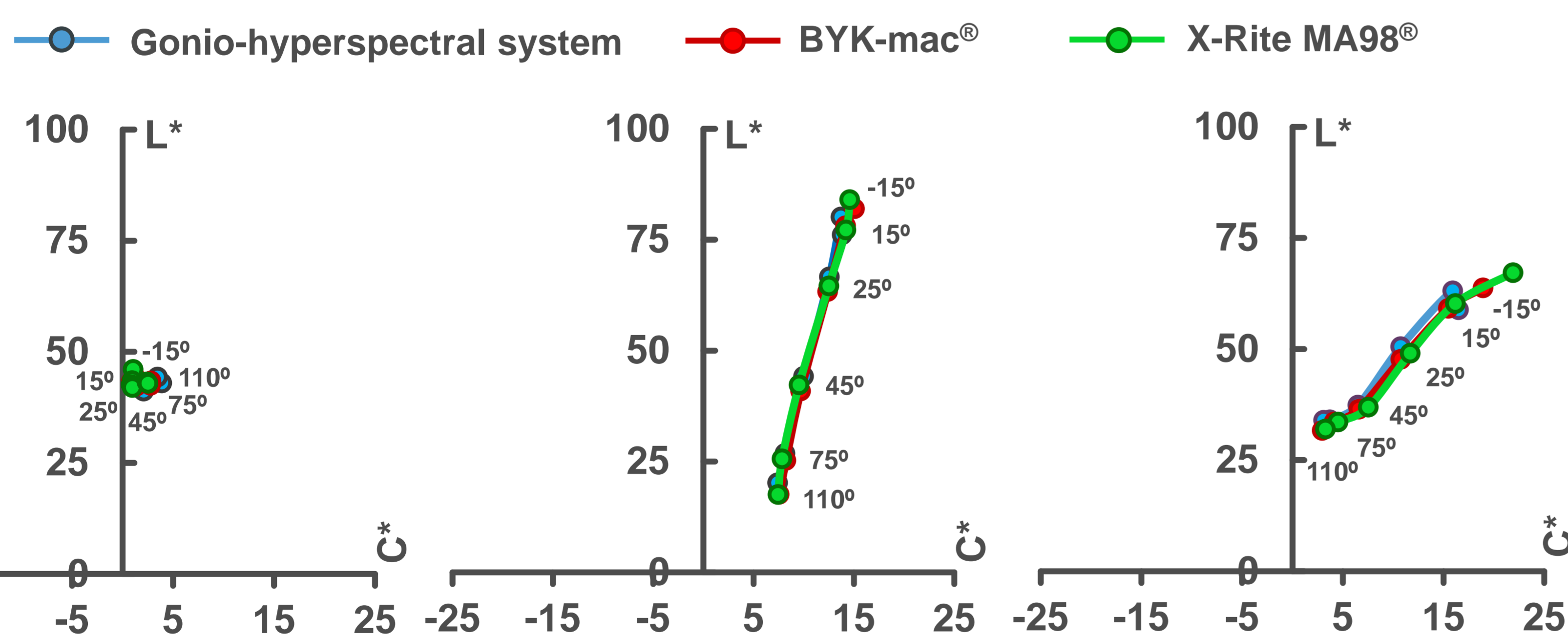


CIE Lab



Reflectance

RESULTS



Sample	Solid		Metallic		Pearlescent	
ΔE	BYK-mac	X-Rite	BYK-mac	X-Rite	BYK-mac	X-Rite
45°x:-60°	2,48	3,93	6,24	8,19	5,61	9,95
45°x:-30°	1,32	1,65	2,43	3,22	5,2	4,28
45°x:-20°	1,58	1,77	3,37	2,12	3,67	2,42
45°x:0°	1,36	1,39	3,37	2,12	2,21	2,1
45°x:30°	1,24	1,49	1,6	1,29	1,51	1,39
45°x:65°	2,01	1,72	2,61	2,63	2,52	2,12

CONCLUSIONS

Development of a LED-based gonio-hyperspectral imaging system for the analysis of automotive paintings.

Good colorimetric performance and similar to that of the BYK-mac® and the X-Rite MA98®.

Future work: Minimization of the colour differences when dealing with pearlescent pigments and development of texture descriptors.

ACKNOWLEDGEMENTS

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