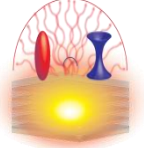
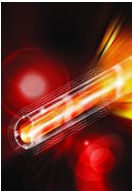
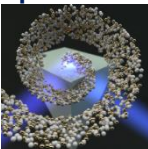

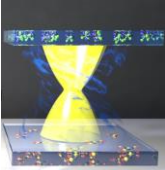


High Impact Papers as **Group Leader** (last 5 years)

- Names of students have been underlined
- h-index = 21, citations > 3300 according to Google Scholar

Area	Title	Authors	Journal	Highlights
Thermal 	Controlling thermal emission with refractory epsilon-near-zero metamaterials via topological transitions,	P. N. Dyachenko*, <u>S. Molesky</u> *, A. Yu Petrov, M. Störmer, T. Krekeler, S. Lang, M. Ritter, Z. Jacob & M. Eich	Nature Communications (2016)	- in progress
	Thermal Hyperbolic Metamaterials,	<u>Yu Guo</u> and Z. Jacob	Optics Express	Cited > 70 times
	High temperature epsilon-near-zero and epsilon-near-pole metamaterial emitters for thermophotovoltaics	<u>Sean Molesky</u> , <u>Christopher J. Dewalt</u> , and Zubin Jacob	Optics Express	Cited > 80 times Highlighted by Nature Photonics, OSA spotlight on optics, Laser Focus World,
	Broadband super-Planckian thermal emission from hyperbolic metamaterials	<u>Y. Guo</u> , <u>C. Cortes</u> , <u>S. Molesky</u> and Z. Jacob	Applied Physics Letters	Cited > 100 times, - Highlighted by APL as among their top cited papers in photonics in the last five years
Metamaterials 	All-Dielectric Metamaterials	<u>Saman Jahani</u> and Zubin Jacob	Nature Nanotechnology (2016)	- Highlighted by many applied physics websites worldwide and multiple interviews
	Relaxed Total Internal Reflection	<u>Saman Jahani</u> and Zubin Jacob	IEEE Photonics Letters 2014	Invited article for collection on Breakthroughs in Photonics 2014
	Transparent Sub-Diffraction Optics: Nanoscale light confinement without metal	<u>Saman Jahani</u> and Zubin Jacob	Optica	Highlighted by OSA, phys.org, many leading optics websites worldwide, selected as top 10 stories of U. Alberta , Out of the top 10 Optica downloads in 2015, 2 papers were from zjresearchgroup
Spin 	Universal Spin-Momentum Locking of Evanescent Waves	<u>T. V. Mechelen</u> and Z. Jacob	Optica (2016)	Spinning light waves might be locked for photonics technologies – phy.org and nanowerk

Vacuum Fluctuations 	Singular evanescent wave resonances in moving media	<u>Y. Guo</u> and Z. Jacob	Optics Express	Highlighted by laser focus world, SPIE newsroom
	Giant non-equilibrium vacuum friction	<u>Y. Guo</u> and Z. Jacob	Optics Express	Cover of journal of optics, selected for IOP labtalk
Quantum Photonics 	Quantum nanophotonics with hyperbolic metamaterials	<u>C. Cortes</u> , <u>W. Newman</u> , <u>S. Molesky</u> , Z. Jacob	J. of Optics (2012)	Cited > 200 times
	Topological transitions in metamaterials	HNS Krishnamoorthy*, Z Jacob *, E Narimanov, I Kretzschmar, VM Menon (* equal author contribution)	Science (2012)	Cited > 200 times
	Plasmonics goes quantum	Z. Jacob and V. M. Shalaev	Science (2011)	Cited > 100 times

Group:



(multiple SPIE, OSA etc. award winners and Canadian and Alberta fellowship winners)

Alumni:

Name	Prashant Shekhar	Yu Guo	Huan Hu	Jon Atkinson
Degree/Year	M.S. 2013	M.S. 2014	M.S. 2014	M.S. 2015
Next Position	PhD: Univ. of Alberta	PhD. Stanford Univ.	PhD, UCSD	PhD, Waterloo Univ.