

MNA	2-methyl-4-nitroaniline
MMONS	3-methyl-4-methoxy-4'-nitrostilbene
m-NA	p-nitroaniline
POM	3-methyl-4-nitropyridine 1-oxide
COANP	2-(cyclooctylamino)-5-nitropyridine
PNP	2-(N-prolinol)-5-nitropyridine
PMMA	poly(methyl methacrylate)
DRI	4-[N-ethyl-N-(2 hydroxyethyl)amino]-4'-nitroazobenzene (Disperse Red 1)
TCV	4-(tricyanovinyl)-4'-(diethylamino)azobenzene
NNDN	N,N-diglycidyl-4 nitroaniline
NAN	N-(2-aminophenyl)-4-nitroaniline
DCV	4-(dicyanovinyl)-4'-(dimethylamino)azobenzene
DANS	4-(dimethylamino)-4'-nitrostilbene
3RDCVXY	4-(dicyanovinyl)-4'-(diethylamino)diazobenzene

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NLO-Polymers and Their Applications in Devices

Gustaaf R. Möhlmann*

Hyperpolarizable groups attached to polymers have been used as optically nonlinear materials for thin film guided wave, passive as well as active (electro-optic) devices. Multilayers comprising polymeric core and cladding layers thus forming slab waveguides on a substrate, have been prepared. Close to the glass transition temperature of the polymer (e.g. 140°), strong electric fields (100 V/μm) induced the electro-optic effect. Via UV bleaching through selected masks, channel waveguides have been realised by locally decreasing the refractive indices. Finally,

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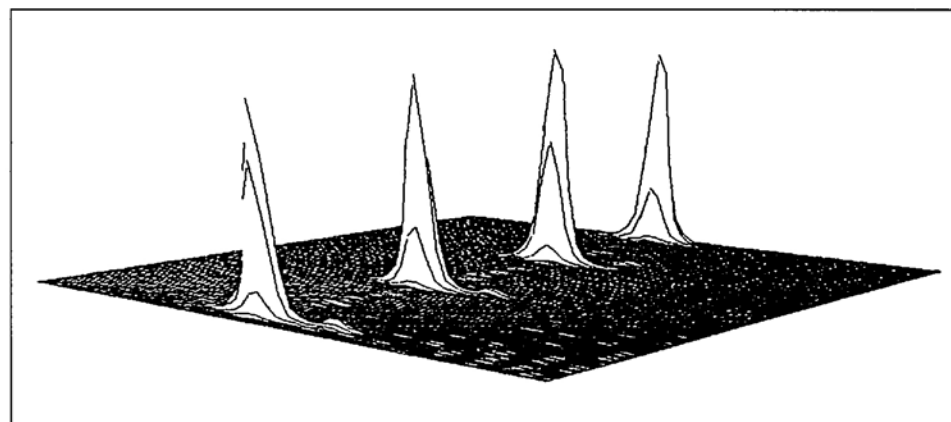


Figure. Output intensity profile of a 1*4 passive optical power splitter

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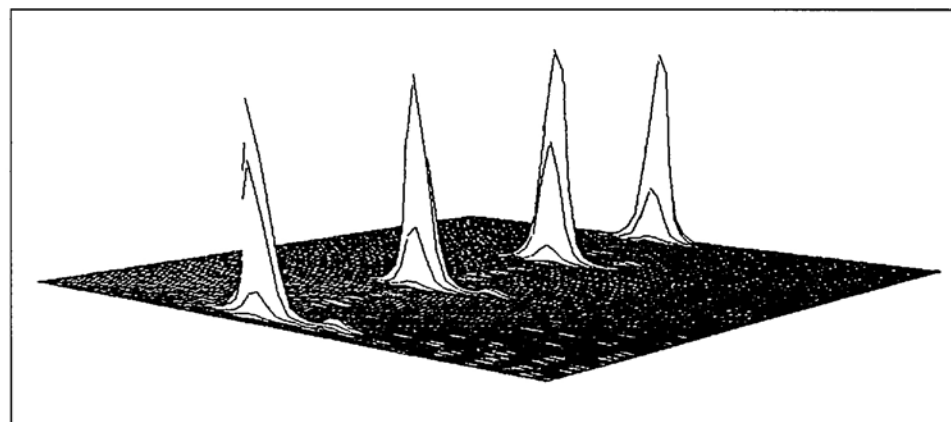


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