张耀举教授简介

一、个人基本情况：

姓　　名：张耀举

性　　别：　男

出生年月：1960.7

民　　族：汉族

职称职务：教授

最后学历、学位：研究生、博士

工作单位：温州大学物理与电子信息工程学院

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二、从事研究的专业领域及主要研究方向

课程教学：目前主要从事《模拟电子技术》、《数字电子技术》、《电子技术综合实践》、《电路分析》、《信息光学》和《传感与检测》等课程的教学工作。

研究的专业领域：目前主要从事微纳光电器件和新能源技术研究

目前主要研究方向：

(1) 太阳能电池新技术及其应用

(2) 微型继电器设计与制作

(3) 微流控

三、主要工作经历及业绩

1978 年 10 月~1981 年 7 月　开封师范专科学校物理学专科生

1985 年 9 月~1987 年 7 月　河南师范大学物理学本科生

1987 年 9 月~1990 年 6 月　河南师范大学物理学硕士研究生，硕士

2002 年 7 月~2002 年 12 月　中国科学院上海光学精密机械研究所访问学者

2009 年 7 月~2009 年 12 月　日本熊本大学高访研究学者

2010 年 1 月　获日本熊本大学光电信息工程博士学位

2011 年～至今　温州大学激光与光电子技术研究所所长

四、目前主持的主要科研项目

宽波段高效率深刻蚀圆形聚焦光栅及其在太阳电池中的应用研究(61377021), 国家自然科学基金面上项目, 2014.1-2017.12

五、近年主要科研成果目录（含论文、课题及科研获奖）

1、部分论文和专著：

(1) Diffraction in a stratified region of a high numerical aperture Fresnel zone plate: a simple and rigorous integral representation，Opt. Express, 2015, Vol.23, Issue 6,page:8051-8060

(2) Diffraction theory of high numerical aperture subwavelength circular binary phase Fresnel zone plate, ，Opt. Express, 2014, Vol.22, Issue 22,page: 27425-27436

(3) Analysis of nearfield subwavelength focusing of hybrid amplitude–phase Fresnel zone plates under radially polarized illumination, Journal of Opt.16 (2014) 015703-6

(4) Effect of the shadowing in high-numerical-aperture binary phase Fresnel zone plates, Optics Communications, 317(2014)88–92

(5) Multifocal optical trapping using counter-propagating radially-polarized beams, Opt. Commun. 285(5) (2012) 725–730

(6) Trapping Rayleigh Particles Using Highly Focused Higher-order Radially Polarized Beams, Optics Communications, 2011,Vol.284, Issue 7, page:1734-1739

(7) Generation of three-dimensional dark spots with a perfect light shell with a radially polarized Laguerre–Gaussian beam, Applied Optics, 2010,Vol.49, Issue 32, page:6217-6223

(8) Symmetry properties of three-dimensional magnetization distributions induced by focused circularly polarized lights, Optik, 2010, Vol.121, Issue 22, page: 2062–2066

(9) Longer axial trap distance and larger radial trap stiffness using a double-ring radially polarized beam, Optics Letters, 2010, Vol. 35, Issue 8, page:1281-1283

(10) Near-field double-spot photolithography with subwavelength spacing, Optics Communications, 2010,Vol. 283, Issue 15, pages: 3022-3025
(11) Trapping two types of particles using a double-ring-shaped radially polarized beam, Physical Review A, 2010,Vol.81, Issue 2, page: 023831-5
(12) Magnetic field distribution of a highly focused radially-polarized light beam, Optics Express, 2009,Vol.17, Issue 24, page:22235-22239
(13) Improving Recording Density of All-Optical Magnetic Storage by Using High-Pass Angular Spectrum Filters, Chin. Phys. Lett., 2009,Vol. 26, Issue 10, page:108501-3
(14) Large negative Goos-Hanchen shift from a wedge-shaped thin film, Chin. Opt. Lett., 2009,Vol.7, Issue 9, page:845-848
(15) Theoretical study of optical recording with a solid immersion lens illuminated by focused double-ring-shaped radially polarized beam, Optics Communications, 2009, Vol.282, Issue 23, page:4481-4485
(16) Dispersion effect in optical microscopy systems with a supersphere solid immersion lens, Chinese Physics B, 2009,Vol. 18, Issue 7, page:2788-2793
(17) All-optical magnetic superresolution with binary pupil filters, J. Opt. Soc. Am. B, 2009,Vol.26, Issue 7, page:1379-1383
(18) Improving the recording ability of a near-field optical storage system by higher-order radially polarized beams, Opt. Express, 2009,Vol.17, Issue 5, 2009, page:3698-3706
(19) Theoretical study on all-optical magnetic recording using a solid immersion lens, J. Opt. Soc. Am. B, 2009,Vol. 26, Issue 7, page:176-182
(20) Simple and high efficient optical trapping using a cylindrical lens and a single plane wave of incidence, Opt. Commun., 2008,Vol.281, Issue 19, page:4824-4828
(21) High-density all-optical magnetic recording using a high-NA lens illuminated by circularly polarized pulse lights, Physics Letters A, 2008 ,Vol.372, Issue 41, page:6294-6297
(22) Giant positive and negative lateral shifts from the Kretschmann–Raether configuration with a weakly absorbing left-handed slab, Physics Letters A, 2008,Vol.372, Issue 41, page:6294-6297
(23) Generation of thin and hollow beams by the axicon with a large open angle, Opt. Commun., 2008,Vol.281,Issue 4, page:508-514
(24) Analytical expression for the diffraction field of an axicon using the ray-tracing and interference method, Applied Physics B, 2008,Vol.90, Issue 1, page:93-96
(25) Simple and rigorous analytical expression of the propagating field behind an axicon illuminated by an azimuthally polarized beam, Appl. Opt., 2007,Vol.46, Issue 29, page:7252-7257
(26) Design of three-dimensional superresolving binary amplitude filters by using the optimizing method, Opt. Commun., 2007,Vol. 276, Issue 8, page: 327–331
(27) Optimizing the optical field distribution of solid immersion lens system by a continuous phase filter, Chiness Optics Letters, 2007,Vol.5, Issue 6, page:318-321
(28) Design of three-dimensional superresolving binary amplitude filters by using the analytical method, Opt. Commun., 2007,Vol. 274, Issue 1, page: 37–42
(29) Three-zone phase-only filter increasing the focal depth of optical storage systems with a solid immersion lens, Appl. Phys. B, Vol. 2007, Vol.86, Issue 1, page: 97-103
(30) Optical intensity distribution of a plano-convex solid immersion mirror, J. Opt. Soc. Am. A,

2007,Vol. 24, Issue 1, page: 211-214
(31) Multilevel phase Fresnel zone plate lens as a near-field optical element, Opt. Commun., 2007,Vol. 269, Issue 1, page: 271-273
(32) Propagation of vectorial Gaussian beams behind a circular aperture, Optics & Laser Technology, 2007,Vol.39, Issue 4, page: 598-604
(33) Optical data storage system with a plano-ellipsoidal solid immersion mirror illuminated directly by a point light source, Appl. Opt., 2006, Vol.45, page: 8653-8658
(34) Multiple reflection effect inside a hemispherical solid immersion lens, Opt. Commun., 2006,Vol.266, page: 94-99
(35) A new three-zone amplitude-only filter for increasing the focal depth of near-field solid immersion lens systems, J. Mod. Opt., 2006, Vol.53, page: 1919-1925
(36) Theoretical study of near-field optical storage with a solid immersion lens, J. Opt. Soc. Am. A, 2006,Vol.23, page: 2132-2136
(37) Calculation of the vectorial field distribution of an axicon illuminated by a linearly polarized Gaussian beam, Optik, 2006,Vol.117, page:118-122
(38) Design of high-performance supersphere solid immersion lenses, Appl. Opt., 2006,Vol.45, page: 4540-4546
(39) Converging spherical wave propagation in a hemispherical solid lens, J. Opt. A: Pure Appl. Opt., 2006,Vol.8, page:578-583
(40) Vector propagation of radially polarized Gaussian beams diffracted by an axicon, J. Opt. Soc. Am. A, 2005,Vol.22, page: 2542-2546
(41) Focal shifts in focused beams with an elliptical diffracting screen, J. Mod. Opt., 2006, Vol.52, page:1827-1833
(42) Nonparaxial propagation analysis of elliptical Gaussian beam, Opt. Commun., 2005,Vol.248, page:317-326
(43) Improving the resolution of a solid immersion lens optical system using a multiphase Fresnel zone plate, Opt. & Laser Techn., 2005,Vol.37, page: 444-449
(44) Diffractive super-resolution elements applied to near-field optical data storage with solid immersion lens, New J. Phys., 2004,Vol. 6, pageL:75-14
(45) Axial intensity distribution behind a Fresnel zone plate, Opt. & Laser Techn., 2004,Vol.37, page:77-80
(46) Focal-field distribution of the solid immersion lens system with an annular filter, Optik, 2004,Vol.115, page: 277-280
(47) A study of the optical transfer functionfor annular binary filters, Optik, 2003, ol.114, page:76-80
(48) Near-field interference optical trapping of rayleigh particle using two counter-propagating Gaussian beams, 光子学报, ,2008,Vol.37page:215-219
(49) Analyzing the axial intensity of plane waves diffracted nonparaxially by a small circular aperture, 光子学报, 2006,Vol.35, Issue 12, page:1917-1920

2、已完成科研课题：

(1) 俘获两类不同折射率粒子的光镊原理与实验研究(No. 61078023), 国家自然科学基金面上项目 （2010-2013）

(2) 固体浸没透镜新的设计和制作方法及其应用研究(60777005)，国家自然科学基金面上项目 （2008-2011）

(3) 深刻蚀圆形石英光栅及其应用研究（No. 2010C31051）,浙江省公益性技术应用研究计划项目 （2010-2013）

3、科研获奖：

(1) 低压塑壳断路器保护特性在线智能校验系统研究与实现，2008 年温州市科技进步三等奖，排名第四

(2) 近场固体浸没显微系统设计及显微机理研究，2007 年温州市科技进步三等奖，排名第一

(3) 激光束的变换和高密度光存储的理论研究，2006 年浙江省高校科研成果二等奖，排名第一

(4) Diffractive super-resolution elements applied to near-field optical data storage with solid immersion lens，2005 年温州市第十一届自然科学优秀论文二等奖，排名第一

(5) 二元环形滤波器和光栅衍射研究，2004 年浙江省高校科研成果三等奖，排名第一

六、研究生培养情况

已培养硕士 12 名，目前指导在读硕士研究生 3 名。

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