

# Ko-Ting Cheng (鄭恪亭)

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## Publication List (from 2003)

### Dissertation:

**Studies of biphotonic effect in azo dye-doped liquid crystal films and their applications**

偶氮染料摻雜液晶薄膜之雙光子效應研究及其應用

### SCI Journal Papers

\*corresponding author

- [1] Andy Ying-Guey Fuh\*, Chia-Rong Lee and **Ko-Ting Cheng**, "Fast optical recording of polarization holographic grating based on an azo-dye-doped polymer-ball-type polymer-dispersed liquid crystal film," *Jpn. J. Appl. Phys.* **42**, 4406-4410 (2003). (SCI; IF=1.171; Ranking: 32/76; PHYSICS, APPLIED) (91-2112-M-006-019)
- [2] C.-R. Lee, T.-S. Mo, **K.-T Cheng**, T.-L. Fu and Andy Y.-G. Fuh\*, "Electrically switchable and thermally erasable biphotonic holographic gratings in dye-doped liquid crystal films," *Appl. Phys. Lett.* **83**, 4285-4287 (2003). (SCI; IF=4.049; Ranking: 3/76; PHYSICS, APPLIED) (91-2112-M-006-019)
- [3] C.-R. Lee, T.-L. Fu, **K.-T. Cheng**, T.-S. Mo and Andy Y.-G. Fuh\*, "Surface-assisted photoalignment in dye-doped liquid-crystal films," *Phys. Rev. E* **69**, 031704 (2004). (SCI; IF=2.352; Ranking: 3/21; PHYSICS, FLUIDS & PLASMAS) (91-2112-M-006-019)
- [4] Andy Ying-Guey Fuh\*, **Ko-Ting Cheng** and Chia-Rong Lee, "Biphotonic laser-induced ripple structures in dye-doped liquid crystal films," *Jpn. J. Appl. Phys.* **45**, 7024-7027 (2006). (SCI; IF=1.222; Ranking: 39/84; PHYSICS, APPLIED) (93-2112-M-006-016)
- [5] Andy Ying-Guey Fuh\* and **Ko-Ting Cheng**, "Partially erasable photoalignment layer formed in dye-doped liquid crystal films," *Jpn. J. Appl. Phys.* **45**, 8778-8781 (2006). (SCI; IF=1.222; Ranking: 39/84; PHYSICS, APPLIED) (94-2112-M-006-005)
- [6] **Ko-Ting Cheng**, Chia-Rong Lee and Andy Ying-Guey Fuh\*, "Dynamics of biphotonic intensity holographic gratings based on dye-doped liquid crystal films," *Liq. Cryst.* **34**, 95-100 (2007). (SCI; IF=1.362; Ranking: 11/25; CRYSTALLOGRAPHY) (94-2112-M-006-005)
- [7] Andy Ying-Guey Fuh\*, **Ko-Ting Cheng** and Chia-Rong Lee, "Biphotonic recording effect of polarization gratings based on dye-doped liquid crystal films," *Liq. Cryst.* **34**, 389-393 (2007). (SCI; IF=1.362; Ranking: 11/25; CRYSTALLOGRAPHY) (94-2112-M-006-005)
- [8] **Ko-Ting Cheng**, Cheng-Kai Liu, Chi-Lun Ting and Andy Ying-Guey Fuh\*, "Electrically switchable and optically rewritable reflective Fresnel zone plate in dye-doped cholesteric liquid crystals," *Opt. Express* **15**, 14078-14085 (2007). (SCI; IF=3.709; Ranking: 2/64; OPTICS) (95-2112-M-006-022-MY3)
- [9] **Ko-Ting Cheng**, Cheng-Kai Liu, Chi-Lun Ting and Andy Ying-Guey Fuh\*, "Optical addressing in dye-doped cholesteric liquid crystals," *Opt. Commun.* **281**, 5133-5139 (2008). (SCI; IF=1.552; Ranking: 23/64; OPTICS) (95-2112-M-006-022-MY3)
- [10] Andy Ying-Guey Fuh, Che-Chang Chen, Cheng-Kai Liu and **Ko-Ting Cheng\***, "Polarizer-free, electrically switchable and optically rewritable displays based on dye-doped polymer-dispersed liquid crystals," *Opt. Express* **17**, 7088-7094 (2009). (SCI; IF=3.278; Ranking: 3/71; OPTICS) (95-2112-M-006-022-MY3)

- [11] Andy Ying-Guey Fuh, Cheng-Kai Liu, **Ko-Ting Cheng\***, Chi-Lun Ting, Che-Chang Chen, Paul Chang-Po Chao and Hsu-Kuan Hsu, "Variable liquid crystal pretilt angles generated by photoalignment technique in dye-doped liquid crystals," *Appl. Phys. Lett.* **95**, 161104-1-3 (2009). (SCI; IF=3.554; Ranking: 14/108; PHYSICS, APPLIED) (95-2112-M-006-022-MY3)
- [12] Andy Ying-Guey Fuh, Che-Chang Chen, **Ko-Ting Cheng\***, Cheng-Kai Liu and Wei-Ko Chen, "Polarization-independent holographic gratings based on azo dye-doped polymer-dispersed liquid crystal films," *Appl. Optics* **49**, 275-280 (2010). (SCI; IF=1.707; Ranking: 23/78; OPTICS) (98-2112-M-006-001-MY3)
- [13] Andy Ying-Guey Fuh, Ju-Chin Chen, San-Yi Huang and **Ko-Ting Cheng\***, "Binary liquid crystal alignments based on photoalignment in azo dye-doped liquid crystals and their application," *Appl. Phys. Lett.* **96**, 051103-1-3 (2010). (SCI; IF=3.841; Ranking: 15/118; PHYSICS, APPLIED) (98-2112-M-006-001-MY3)
- [14] Andy Ying-Guey Fuh, Ju-Chin Chen, **Ko-Ting Cheng\*** and San-Yi Huang, "Polarization-independent and electrically tunable liquid crystal Fresnel lenses based on photoalignment in dye-doped liquid crystals," *J. Soc. Inf. Disp.* **18**, 572-576 (2010). (SCI; IF=0.867; Ranking: 87/118; PHYSICS, APPLIED) (98-2112-M-006-001-MY3)
- [15] Andy Ying-Guey Fuh, Jau-Ham Li and **Ko-Ting Cheng\***, "Thermally switchable flexibly liquid crystal devices in prepolymer-doped cholesteric liquid crystals," *Appl. Phys. B* **101**, 225-230 (2010). (SCI; IF=2.24; Ranking: 29/118; PHYSICS, APPLIED) (98-2112-M-006-001-MY3)
- [16] Cheng-Kai Liu, Andy Ying-Guey Fuh, Yuan-Di Chen and **Ko-Ting Cheng\***, "Controlling pitch length of chiral monomer-doped nematic/cholesteric liquid crystals using photo-polymerization," *J. Phys. D-Appl. Phys.* **43**, 505102-1-5 (2010). (SCI; IF=2.109; Ranking: 32/118; PHYSICS, APPLIED) (98-2112-M-006-001-MY3)
- [17] Hung-Chang Jau, **Ko-Ting Cheng**, Tsung-Hsien Lin, Yuan-Si Lo, Jia-You Chen, Chain-Wen Hsu and Andy Ying-Guey Fuh\*, "Photo-rewritable flexible LCD using indium zinc oxide/polycarbonate substrates," *Appl. Optics* **50**, 213-217 (2011). (SCI; IF=1.748; Ranking: 25/77; OPTICS) (98-2112-M-006-001-MY3)
- [18] Cheng-Kai Liu, **Ko-Ting Cheng\*** and Andy Ying-Guey Fuh\*, "Observation of anisotropically reflected colors in chiral monomer-doped cholesteric liquid crystals," *Appl. Phys. Lett.* **98**, 041106-1-3 (2011). (SCI; IF=3.844; Ranking: 17/125; PHYSICS, APPLIED) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)
- [19] Yuan-Di Chen, **Ko-Ting Cheng**, Cheng-Kai Liu and Andy Ying-Guey Fuh\*, "Polarization rotators fabricated by thermally-switched liquid crystal alignments of rubbed poly(N-vinyl carbazole) films," *Opt. Express* **19**, 7553-7558 (2011). (Equal contribution to first author) (SCI; IF=3.587; RK: 5/77; OPTICS) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)
- [20] Yuan-Di Chen, Andy Ying-Guey Fuh\*, Cheng-Kai Liu and **Ko-Ting Cheng\***, "Radial alignment of liquid crystal by circular rubbing the substrate coated with poly(N-vinyl carbazole) film," *J. Phys. D-Appl. Phys.* **44**, 215304-1-5 (2011). (SCI; IF=2.544; Ranking: 26/125; PHYSICS, APPLIED) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)

- [21] Cheng-Kai Liu, Chi-Lun Ting, Ming-Shian Li, Andy Ying-Guey Fuh\* and **Ko-Ting Cheng\***, “Optical simulation of axially symmetrical vertically aligned liquid crystal displays with circularly symmetric iso-contrast,” *J. Display Tech.* **7**, 520-525 (2011). (SCI; IF=2.28; RK: 33/125; PHYSICS, APPLIED) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)
- [22] Andy Ying-Guey Fuh, Chen-Yu Huang, Cheng-Kai Liu, Yuan-Di Chen and **Ko-Ting Cheng\***, “Dual liquid crystal alignment configuration based on nanoparticle-doped polymer films,” *Opt. Express* **19**, 18525-18531 (2011). (SCI; IF=3.587; RK: 5/77; OPTICS) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)
- [23] Andy Ying-Guey Fuh, Yuan-Di Chen, Cheng-Kai Liu and **Ko-Ting Cheng\***, “Azo dye adsorption effect induced by elliptically polarized light in azo dye-doped liquid crystals,” *Dyes Pigment.* **92**, 949-953 (2011). (SCI; IF=3.126; RK: 14/133; ENGINEERING, CHEMICAL) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)
- [24] Cheng-Kai Liu, **Ko-Ting Cheng\*** and Andy Ying-Guey Fuh\*, “Designs of high color purity RGB color filter for liquid crystal displays applications using Fabry-Perot etalons,” *J. Display Tech.* **8**, 174-178 (2012). (SCI; IF=1.663; RK: 48/127; PHYSICS, APPLIED) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)
- [25] Cheng-Kai Liu, Wan-Ling Huang, Andy Ying-Guey Fuh\* and **Ko-Ting Cheng\***, “Binary cholesteric/blue-phase liquid crystal textures fabricated using phototunable chirality in azo chiral-doped cholesteric liquid crystals,” *J. Appl. Phys.* **111**, 013114-1-5 (2012). (SCI; IF=2.210; RK: 31/127; PHYSICS, APPLIED) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)
- [26] Yuan-Di Chen, Andy Ying-Guey Fuh\* and **Ko-Ting Cheng\***, “Particular thermally induced phase separation of liquid crystal and poly(N-vinyl carbazole) films and its application,” *Opt. Express* **20**, 16777-16784 (2012). (SCI; IF=3.546; RK: 4/79; OPTICS) (98-2112-M-006-001-MY3, 99-2112-M-006-002-MY3)
- [27] Yuan-Di Chen, Andy Ying-Guey Fuh and **Ko-Ting Cheng\***, “Optically and thermally controllable light scattering based on dye-doped liquid crystals in poly(N-vinylcarbazole) films-coated liquid crystal cell,” *Opt. Express* **20**, 26252-26260 (2012). (SCI; IF=3.546; RK: 4/79; OPTICS) (101-2112-M-006-011-MY3, 99-2112-M-006-002-MY3)
- [28] Yen-Chen Liu, **Ko-Ting Cheng\***, Yuan-Di Chen, and Andy Ying-Guey Fuh\*, “All-optically controllable and highly efficient scattering mode light modulator based on azobenzene liquid crystals and poly(N-vinylcarbazole) films,” *Opt. Express* **21**, 18492-18500 (2013). (SCI; IF=3.525; RK: 6/82; OPTICS) (101-2112-M-006-011-MY3, 99-2112-M-008-021-MY3)
- [29] Stephen M. Morris\*, Malik Qasim, **Ko-Ting Cheng**, Flynn Castles, Doo-Hyun Ko, Damian James Gardiner, Shabeena Nosheen, Timothy D. Wilkinson, Harry J. Coles, Christopher Burgess, and Hill Lee, “Optically activated shutter using a photo-tunable short-pitch chiral nematic liquid crystal,” *Appl. Phys. Lett.* **103**, 101105 (2013). (SCI; IF=3.515; RK: 20/136; PHYSICS, APPLIED)
- [30] Andy Ying-Guey Fuh, Zong-Han Wu, **Ko-Ting Cheng\***, Cheng-Kai Liu and Yuan-Di Chen, “Direct optical switching of bistable cholesteric textures in chiral azobenzene-doped liquid crystals,” *Opt. Express* **21**, 21840-21846 (2013). (SCI; IF=3.525; RK: 6/82; OPTICS) (101-2112-M-006-011-MY3, 102-2112-M-008-016)

- [31] Andy Ying-Guey Fuh\*, Yan-Cen Liu, **Ko-Ting Cheng\***, Cheng-Kai Liu, and Yuan-Di Chen, “Isomerization-induced phase separation of a mixture of monomer, azobenzene and liquid crystals,” *Sci. Adv. Mater.* **6**, 36-42 (2014). (SCI; IF=2.908; RK: 26/136; PHYSICS, APPLIED) (101-2112-M-006-011-MY3, 102-2112-M-008-016)
- [32] Yen-Chen Liu, **Ko-Ting Cheng\***, Hsin-Fu Chen, and Andy Ying-Guey Fuh\*, “Photo- and electro-isomerization of azobenzenes based on polymer-dispersed liquid crystals doped with azobenzenes and their applications,” *Opt. Express* **22**, 4404-4411 (2014). (SCI; IF=3.525; RK: 6/82; OPTICS) (101-2112-M-006-011-MY3, 102-2112-M-008-016)
- [33] Yen-Chen Liu, **Ko-Ting Cheng\***, and Andy Ying-Guey Fuh\*, “Isothermal electrically and optically induced phase separation of liquid crystal and poly(N-vinylcarbazole) films,” *Opt. Express* **22**, 21004-21011 (2014). (SCI; IF=3.525; RK: 6/82; OPTICS) (101-2112-M-006-011-MY3, 102-2112-M-008-016)

## Patent derivatives (專利)

- [1] 傅永貴 (Andy Y.-G. Fuh), 劉鄭楷, 鄭恪亭, “AN INTERFACE SYSTEM OF AN IMAGE-CAPTURING DEVICE” 099-140BP-US (美國 USA)
- [2] 傅永貴 (Andy Y.-G. Fuh), 陳園迪, 鄭恪亭, “新式節能型液晶光閥 (Novel energy-saving liquid crystal optical shutter)” 100-258AP-US (美國, USA); 100-258AP-JP (日本, Japan)

## Other Publications

- [1] Liang-Chen Lin, **Ko-Ting Cheng**, Cheng-Kai Liu, Chi-Lun Ting, Hung-Chang Jau, Tsung-Hsien Lin and Andy Y.-G. Fuh\*, “Fresnel lenses based on dye-doped liquid crystals,” *Proc. of SPIE* **6911**, 69110I (2008). (**EI Journal**)
- [2] Andy Ying-Guey Fuh\*, **Ko-Ting Cheng**, Cheng-Kai Liu and Chi-Lun Ting, “Electrically switchable and optically rewritable reflective Fresnel zone plate in dye-doped cholesteric liquid crystals,” *Research Express@NCKU (BANYAN)* **7**(4), 1-6 (2009).
- [3] **Ko-Ting Cheng\*** and Andy Ying-Guey Fuh, “Binary liquid-crystal alignment and its applications,” *SPIE Newsroom* (2011.03.10). (DOI: 10.1117/2.1201102.003527, invited article)
- [4] **Ko-Ting Cheng\***, Yuan-Di Chen, Cheng-Kai Liu and Andy Ying-Guey Fuh, “Thermally-switched liquid crystal alignment based on rubbed poly(N-vinyl carbazole) films,” *SPIE Newsroom* (2011.09.14). (DOI: 10.1117/2.1201107.003740, invited article)
- [5] Andy Ying-Guey Fuh\*, Ju-Chin Chen, **Ko-Ting Cheng** and San-Yi Huang, “Binary liquid crystal alignments based on photoalignment in azo dye-doped liquid crystals and their application,” *Research Express@NCKU (BANYAN)* **19**(5), 1-4 (2011).
- [6] **Ko-Ting Cheng\***, Yuan-Di Chen and Andy Ying-Guey Fuh, “Paper No P26: Optically and thermally controllable light scattering based on double-side poly(N-vinylcarbazole) films-coated dye-doped liquid crystal cell,” *SID Symposium Digest of Technical Papers, Special Issue: Proceedings: EuroDisplay 2013*, **44** (Issue Supplement S1), 88–91, (2013).

## Conference papers

(\*corresponding author; presenting author)

### International Conference (abroad)

- [1] **Ko-Ting Cheng\***, Andy Ying-Guey Fuh and Chia-Rong Lee, **2006**, “A biphotonic recording effect of polarization gratings based on dye-doped liquid crystal films,” (Poster), 21<sup>st</sup> International Liquid Crystal Conference, Jul. 2 - Jul. 7, 2006, Keystone, Colorado, USA.
- [2] **Ko-Ting Cheng\***, Cheng-Kai Liu, Chi-Lun Ting and Andy Ying-Guey Fuh, **2008**, “Electrically switchable and optically rewritable reflective Fresnel zone plate in dye-doped cholesteric liquid crystals,” (Poster), 22<sup>nd</sup> International Liquid Crystal Conference, Jun. 29 - Jul. 4, 2008, ICC Jeju, Jeju Island, Korea.
- [3] **Ko-Ting Cheng\***, Cheng-Kai Liu, Chi-Lun Ting and Andy Ying-Guey Fuh, **2008**, “Optically addressed smart cards using dye-doped cholesteric liquid crystals,” (Poster), 22<sup>nd</sup> International Liquid Crystal Conference, Jun. 29 - Jul. 4, 2008, ICC Jeju, Jeju Island, Korea.
- [4] **Ko-Ting Cheng\***, Cheng-Kai Liu, Chi-Lun Ting and Andy Ying-Guey Fuh, **2008**, “Optical addressing in dye-doped cholesteric liquid crystals,” (Poster), 28<sup>th</sup> International Display Research Conference, Nov. 3 - Nov. 6, 2008, University of Central Florida, Orlando, Florida, USA.
- [5] **Ko-Ting Cheng\***, Jau-Ham Li and Andy Ying-Guey Fuh, **2009**, “Optically addressable liquid crystal displays in polymer-dispersed cholesteric liquid crystals,” (Poster), Society for Information Display’s Display Week 2009, May 31 - Jun. 5, 2009, San Antonio Convention Center, San Antonio, Texas, USA.
- [6] **Ko-Ting Cheng\***, Ju-Chin Chen, San-Yi Huang and Andy Ying-Guey Fuh, **2009**, “Polarization-independent Fresnel zone plate based on dye-adsorption onto polymer surface,” (Oral), XXIX (29<sup>th</sup>) International Display Research Conference (Eurodisplay 2009), Sep. 14 - Sep. 17, 2009, Università di Roma “La Sapienza”, Rome, Italy.
- [7] **Ko-Ting Cheng\***, Ju-Chin Chen, San-Yi Huang and Andy Ying-Guey Fuh, **2010**, “Viewing-angle-dependent liquid crystal displays in dye-doped liquid crystals,” (Poster, 171), 23<sup>rd</sup> International Liquid Crystal Conference, Jul. 11 - Jul. 16, 2010, Kraków, Poland.
- [8] Andy Ying-Guey Fuh, Ju-Chin Chen, San-Yi Huang, **Ko-Ting Cheng\***, **2010**, “Viewing-angle-dependent liquid crystal displays,” (Oral), 10<sup>th</sup> International Meeting on Information Display, International Display Manufacturing Conference, and Asia Display 2010, Oct. 11 - Oct. 15, 2010, KINTEX, Seoul, Korea.
- [9] **Ko-Ting Cheng\***, Yuan-Di Chen, Cheng-Kai Liu and Andy Ying-Guey Fuh, **2011**, “Liquid crystal alignment by poly(N-vinyl carbazole) films,” (Oral), XXXI (31<sup>st</sup>) International Display Research Conference (Eurodisplay 2011), Sep. 19 - Sep. 22, 2011, Palais des Congrès, Bordeaux-Arcachon, France.
- [10] **Ko-Ting Cheng\***, Yuan-Di Chen, Cheng-Kai Liu and Andy Ying-Guey Fuh, **2011**, “Thermally-switched liquid crystal alignment based on rubbed PVK films,” (Oral), 11<sup>th</sup> International Meeting on Information Display, International Display Manufacturing Conference, and Asia Display 2011, Oct. 11 - Oct. 15, 2011, KINTEX, Seoul, Korea.
- [11] **Ko-Ting Cheng\***, Andy Ying-Guey Fuh, Cheng-Kai Liu and Yuan-Di Chen, **2011**, “Thermally-switched liquid crystal alignment based on rubbed PVK films,” (Poster), 18<sup>th</sup> International Display Workshops, 2011, Dec. 7 – Dec. 9, 2011, Nagoya Congress Center,

Nagoya, Japan.

- [12] Andy Ying-Guey Fuh, Yen-Chen Liu, **Ko-Ting Cheng\***, Cheng-Kai Liu and Yuan-Di Chen, **2012**, “Optically addressable, polarizer-free, and multi-stable scattering mode liquid crystal displays,” (Oral), 24<sup>th</sup> International Liquid Crystal Conference, Aug. 19 - Aug. 24, 2012, Mainz, Germany.
- [13] Yuan-Di Chen, Andy Ying-Guey Fuh and **Ko-Ting Cheng\***, **2012**, “Thermally induced phase separation of liquid crystal and poly(N-vinyl carbazole) substrates,” (Poster), 24<sup>th</sup> International Liquid Crystal Conference, Aug. 19 - Aug. 24, 2012, Mainz, Germany.
- [14] **Ko-Ting Cheng\***, Yuan-Di Chen, and Andy Ying-Guey Fuh, **2012**, “Scattering mode LC light shutter based on double-side poly(N-vinyl carbazole) films,” (Oral), 19<sup>th</sup> International Display Workshops, 2012, Dec. 4 – Dec. 7, 2012, Kyoto International Conference Center, Kyoto, Japan.
- [15] **Ko-Ting Cheng\***, Yuan-Di Chen, and Andy Ying-Guey Fuh, **2013**, “Optically and thermally controllable light scattering based on double-side poly(N-vinylcarbazole) films-coated dye-doped liquid crystal cell,” (Poster), Eurodisplay 2013 (33<sup>rd</sup> International Display Research Conference), Sep. 16 - Sep. 19, 2013, Imperial College London, London, UK.
- [16] Yuan-Di Chen, **Ko-Ting Cheng**, Yuan-Di Chen, and Andy Ying-Guey Fuh, **2013**, “All-optically controllable scattering mode light modulator,” (Poster), 20<sup>th</sup> International Display Workshops, 2013, Dec. 4 – Dec. 6, 2013, Sapporo Convention Center, Sapporo, Japan. (*Outstanding Poster Paper Award*)
- [17] **Ko-Ting Cheng\***, Andy Ying-Guey Fuh, Zong-Han Wu, Cheng-Kai Liu, and Yuan-Di Chen, **2014**, “Bistable cholesteric textures in chiral azobenzene-doped liquid crystals,” (Oral), 21<sup>st</sup> International Workshop on Active-Matrix Flat Panel Displays and Devices, July 2 – July 4, 2014, Ryukoku University Avanti Kyoto Hall, Kyoto, Japan.

### **International Conference (Taiwan)**

- [1] Andy Y.-G. Fuh, C.-C. Chen, C.-K. Liu and **K.-T. Cheng\***, **2008**, “Polarizer-free liquid crystal displays based on dye-doped polymer-dispersed liquid crystals,” (Oral), 2008 International Conference on Optics and Photonic in Taiwan, Dec. 5-6, 2008, Taipei, Taiwan.
- [2] Andy Y.-G. Fuh, J.-C. Chen, **K.-T. Cheng\*** and S.-Y. Huang, **2010**, “Viewing-angle-dependent liquid crystal displays in azo dye-doped liquid crystals,” (Poster), 2010 Taiwan Display Conference, Apr. 29-30, 2010, Tainan, Taiwan. (*Outstanding Poster Paper Award*, 壁報論文獎)
- [3] Andy Y.-G. Fuh, C.-K. Liu, **K.-T. Cheng\***, C.-L. Ting, C.-C. Chen, Paul C.-P. Chao and H.-K. Hsu, **2010**, “Variable liquid crystal pretilt angles generated by photoalignment in homeotropically aligned azo dye-doped liquid crystals,” (Poster), 2010 Taiwan Display Conference, Apr. 29-30, 2010, Tainan, Taiwan. (*Outstanding Poster Paper Award*, 壁報論文獎)
- [4] J.-Y. Chen, **K.-T. Cheng\***, C.-K. Liu, C.-L. Ting and Andy Y.-G. Fuh, **2010**, “Optical addressing in dye-doped cholesteric liquid crystals,” (Poster), 2010 Taiwan Display Conference, Apr. 29-30, 2010, Tainan, Taiwan.
- [5] **K.-T. Cheng\***, J.-C. Chen, S.-Y. Huang and Andy Y.-G. Fuh, **2010**, “Viewing-angle-dependent liquid crystal displays in dye-doped liquid crystals,” (Oral), 2010

International Conference on Optics and Photonics in Taiwan, Dec. 3-4, 2010, Tainan, Taiwan.

- [6] Y.-D. Chen, **K.-T. Cheng\***, Andy Y.-G. Fuh and C.-K. Liu, **2010**, “Studies of radial LC alignment device based on circular rubbing of PVK films,” (Oral), 2010 International Conference on Optics and Photonics in Taiwan, Dec. 3-4, 2010, Tainan, Taiwan.
- [7] **K.-T. Cheng\***, C.-Y. Huang, C.-K. Liu, Y.-D. Chen and Andy Y.-G. Fuh, **2011**, “Patterned liquid crystal alignment based on nanoparticle-doped polymer films,” (Poster), 2011 International Photonics Conference, Dec. 8-10, 2011, Tainan, Taiwan.
- [8] Y.-D. Chen\*, **K.-T. Cheng**, C.-K. Liu and Andy Y.-G. Fuh, **2011**, “Novel polarization rotator fabricated by thermally-switched liquid crystal alignments based on rubbed poly(N-vinyl carbazole) films,” (Oral), 2011 International Photonics Conference, Dec. 8-10, 2011, Tainan, Taiwan.
- [9] Y.-C. Liu, H.-F. Chen, **K.-T. Cheng** and Andy Y.-G. Fuh, **2013**, “Optically and electrically induced isomerization based on azobenzene liquid crystals and its application” (Poster) Optics and Photonics Taiwan, International Conference (OPTIC 2013), Dec. 5-7, 2013, Zhongli (Chung-Li), Taiwan.
- [10] Y.-C. Liu, **K.-T. Cheng**, Y.-D. Chen and Andy Y.-G. Fuh, **2013**, “All-optically controllable scattering mode light modulator based on azobenzene liquid crystals and Poly(N-vinylcarbazole) films” (Poster) Optics and Photonics Taiwan, International Conference (OPTIC 2013), Dec. 5-7, 2013, Zhongli (Chung-Li), Taiwan.
- [11] **K.-T. Cheng** and P.-Y. Lee, **2013**, “Electro-optical properties of light scattering in azobenzene-doped cholesteric liquid crystals” (Poster) Optics and Photonics Taiwan, International Conference (OPTIC 2013), Dec. 5-7, 2013, Zhongli (Chung-Li), Taiwan.

## **Domestic Conference (Taiwan)**

### **Oral presentation**

- [1] **K.-T. Cheng**, C.-R. Lee and Andy Y.-G. Fuh, **2005**, “Biphotonic laser-induced ripple structures in dye-doped liquid crystal films,” (Oral), 2005 Optics and Photonics in Taiwan, Dec. 9-10, 2005, Tainan, Taiwan.
- [2] **K.-T. Cheng**, C.-R. Lee and Andy Y.-G. Fuh, **2006**, “A biphotonic recording effect of polarization gratings based on dye-doped liquid crystal films,” (Oral), 2006 Annual Meeting of Physical Society, R.O.C., Jan. 16-18, 2006, Taipei, Taiwan.
- [3] **K.-T. Cheng** and Andy Y.-G. Fuh, **2006**, “Partially erasable photoalignment layer formed in dye-doped liquid crystal films,” (Oral), 2006 Optics and Photonics in Taiwan, Dec. 15-16, 2006, Hsinchu, Taiwan.
- [4] **K.-T. Cheng** and Andy Y.-G. Fuh, **2007**, “Partially erasable photoalignment layer formed in dye-doped liquid crystal films,” (Oral), 2007 Annual Meeting of Physical Society, R.O.C., Jan. 23-25, 2007, Taoyuan, Taiwan.
- [5] **K.-T. Cheng**, C.-K. Liu and Andy Y.-G. Fuh, **2007**, “Photo-patterning in dye-doped cholesteric liquid crystals and its application for use as smart cards,” (Oral), 2007 Optics and Photonics in Taiwan, Nov. 30-Dec. 1, 2007, Taichung, Taiwan.
- [6] **K.-T. Cheng**, C.-K. Liu, C.-L. Ting and Andy Y.-G. Fuh, **2008**, “Electrically switchable and optically rewritable reflective Fresnel zone plate in dye-doped cholesteric liquid crystals,”

(Oral), 2008 Annual Meeting of Physical Society, R.O.C., Jan. 28-30, 2008, Hsinchu, Taiwan.

- [7] Andy Y.-G. Fuh, C.-C. Chen, C.-K. Liu and **K.-T. Cheng**, 2009, “Polarizer-free liquid crystal displays based on dye-doped polymer-dispersed liquid crystals,” (Oral), 2009 Annual Meeting of Physical Society, R.O.C., Jan. 19-21, 2009, Changhua, Taiwan.
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