Electronic Supplementary Information

Engineering the sign of circularly polarized emission in achiral polymer -

chiral small molecule blends as a function of blend ratio

Li Wan^{abc†‡}, Jessica Wade^{abc†}, Xuhua Wang^{ac}, Alasdair J. Campbell^{ac§}and Matthew J. Fuchter^{bc*}

Dedication: Dedicated to the memory of Professor Alasdair James Campbell.

^a Department of Physics, Imperial College London, South Kensington Campus, London SW7 2AZ,

United Kingdom

^b Department of Chemistry and Molecular Sciences Research Hub, Imperial College London, White

City Campus, 82 Wood Lane, London W12 0BZ, United Kingdom

^c Centre for Processable Electronics, Imperial College London, South Kensington Campus, London SW7

2AZ, United Kingdom

§ Deceased

⁺ These authors contributed to this work equally

[‡] Present address: Department of Physics, Chemistry and Biology, Linköping University, Linköping

58183, Sweden

Contents

Figure S1 Definition of Left and Right handed Circularly Polarised Light adopted in CD measurement.
Figure S2 Device structure and energy diagram of F8T2 based CP-OLED
Figure S3 Comparison of g_{PL} and g_{EL} of F8BT:10wt% aza[6]H and F8T2:10wt% aza[6]H thin films and
devices
Figure S4 (a, c) Absorption and (b, d) PL spectra of 60 nm (a, b) and 100 nm (c, d) films with
increasing wt% [M]-aza[6]H. Neat F8T2 corresponds to 0 wt% aza[6]H5

Detection of Left-handed Light



Figure S1 Definition of Left and Right handed Circularly Polarised Light adopted in CD measurement.

The above handedness convention of circularly polarized light (as shown in Figure S1) is defined from the point of view of the receiver and is consistent with the CD data sign convention. In the present work, the Thorlabs quarter wave plate (QWP) used to measure all CP-PL and CP-EL was purchased before 2018. Pre-2018 the <u>'FAST' engraving</u> on the Thorlabs QWP corresponds to the *slow axis* in the above convention. This means that the CP-PL and CP-EL data presented in this paper use the opposite CP handedness convention to CD. [Note: Thorlabs' newer (post-2018) QWPs have a <u>'FAST AXIS' engraving</u> that are instead compatible with the above convention].



Figure S2 Device structure and energy diagram of F8T2 based CP-OLED.



Figure S3 Comparison of g_{PL} and g_{EL} of F8BT:10wt% aza[6]H and F8T2:10wt% aza[6]H thin films and devices.



Figure S4 (a, c) Absorption and (b, d) PL spectra of 60 nm (a, b) and 100 nm (c, d) films with increasing wt% [*M*]-aza[6]H. Neat F8T2 corresponds to 0 wt% aza[6]H.