



## Contents

Editorial .....	vii
Preface .....	ix
<b>Growth techniques for molecular single crystals</b>	
Exploring the polymorphism of crystalline pentacene R.G. Della Valle, A. Brillante, E. Venuti, L. Farina, A. Girlando and M. Masino. ....	1
<b>High quality molecular films by OMBE and related techniques</b>	
Organisation, structure and morphology of organic thin films via electron microscopy A. Thierry, J.C. Wittmann, B. Lotz, V. da Costa, J. Le Moigne, M. Campione, A. Borghesi, A. Sassella, H. Plank and R. Resel. ....	7
Morphology and growth kinetics of organic thin films deposited by hot wall epitaxy A.Yu. Andreev, C. Teichert, G. Hlawacek, H. Hoppe, R. Resel, D.-M. Smilgies, H. Sitter and N.S. Sariciftci. ....	23
Growth of polyalkylthiophene films by matrix assisted pulsed laser evaporation A. Gutiérrez-Llorente, G. Horowitz, R. Pérez-Casero, J. Perrière, J.L. Fave, A. Yassar and C. Sant. . . .	29
Growth of 3,4,9,10-perylenetetracarboxylic-dianhydride crystallites on noble metal surfaces Th. Wagner, A. Bannani, C. Bobisch, H. Karacuban, M. Stöhr, M. Gabriel and R. Möller. ....	35
Structure and morphology of sexiphenyl thin films grown on aluminium (1 1 1) R. Resel, I. Salzmann, G. Hlawacek, C. Teichert, B. Koppelhuber, B. Winter, J.K. Krenn, J. Ivanco and M.G. Ramsey. ....	45
<b>Electronic properties of crystals and films</b>	
Analysis of deep traps in 4,4'-bis(4-dimethylaminostyryl benzene) based light emitting diode devices T.P. Nguyen, P. Le Rendu, P. Lévêque, J. Ip, O. Gaudin and R.B. Jackman. ....	53
Efficient energy transfer in organic thin films by ultra-high vacuum evaporation W. Porzio, U. Giovanella, C. Botta, M. Pasini, S. Destri, C. Provasi and V. Rossi. ....	59
Pentacene thin-film transistors with polymeric gate dielectric J. Puigdollers, C. Voz, A. Orpella, R. Quidant, I. Martín, M. Vetter and R. Alcubilla. ....	67
<b>Optical properties of crystals and films</b>	
The application of reflectance anisotropy spectroscopy to organics deposition C. Goletti, G. Bussetti, P. Chiaradia, A. Sassella and A. Borghesi. ....	73
Oxygen-induced quenching of photoexcited states in polythiophene films L. Lüer, H.-J. Egelhaaf, D. Oelkrug, G. Cerullo, G. Lanzani, B.-H. Huisman and D. de Leeuw. ....	83
Influence of molecular anisotropy on the optical properties of nanocrystalline films of $\pi$ -conjugated systems G. Weiser and S. Möller. ....	91
Time-resolved photoluminescence in $\alpha$ -PTCDA single crystals: evidence for recombination via Frenkel excitons, charge transfer states, and excimers R. Scholz, A.Yu. Kobitski, I. Vragović, H.P. Wagner and D.R.T. Zahn. ....	99

Molecular stacking and emission properties in Langmuir–Blodgett films of two alkyl substituted perylene tetracarboxylic diimides T. del Caño, V. Parra, M.L. Rodríguez-Méndez, R. Aroca and J.A. de Saja . . . . .	107
<b>Modelling of the growth mechanisms and properties of molecular crystalline materials</b>	
Theoretical models for electro-absorption spectroscopy P. Petelenz . . . . .	115
Effects of intermolecular interactions on photoluminescence efficiency of crystalline thienylene- <i>S,S</i> -dioxide molecular semiconductors F. Della Sala, G. Gigli, M.F. Raganato, M. Anni, D. Pisignano, R. Cingolani, L. Favaretto, G. Sotgiu, G. Barbarella and L. Antolini . . . . .	129
Structure, morphology, and optical properties of thin films of F <sub>16</sub> CuPc grown on silicon dioxide J.O. Ossó, F. Schreiber, M.I. Alonso, M. Garriga, E. Barrena and H. Dosch . . . . .	135
Structural characterisation of polycrystalline $\alpha,\omega$ -dihexyl quaterthiophene thin films by transmission electron microscopy M. Campione, A. Borghesi, M. Moret, A. Sassella, B. Lotz and A. Thierry . . . . .	141
<b>Chemistry-related aspects of organic crystalline materials</b>	
Self-assembled organic supramolecular thin films for nonlinear optics A.N. Rashid and P. Gunter . . . . .	147