

TABLE OF CONTENTS

COMM. No.	TITLE	AUTHOR	PAGE
830H-IV	Thiazinocyanines. IV. Simple Cyanines Con- taining the 2,4-Benzthiazine Nucleus	{ <i>B. Beilenson</i> <i>F. M. Hamer</i> <i>R. J. Rathbone</i>	9
961	Studies in Optics. II. Analysis of a Given System with the Help of the Characteristic Function, Using the Direct Method of Analysis	<i>M. Herzberger</i>	16
969	The Probable Number of Aggregates in Ran- dom Distributions of Points	<i>L. Silberstein</i>	20
983	Sensitivity Distribution among the Grains of Photographic Emulsions	<i>A. P. H. Trivelli</i>	21
985	Maximum Emulsion Speed in Relation to the Developing Agent	<i>T. H. James</i>	30
986	Comparison of the Structures of Stretched Linear Polymers	<i>M. L. Huggins</i>	37
987	Quantum Theory of Exposure Tested Ex- tensively on Photographic Emulsions	{ <i>L. Silberstein</i> <i>A. P. H. Trivelli</i>	45
988H	Combinations of Spherical Lenses to Replace Nonspherical Refracting Surfaces in Optical Systems	<i>J. L. Houghton</i>	58
989	Formaldehyde-Hydroquinone Developers and Infectious Development	<i>J. A. C. Yule</i>	61
991H	Aggregates in One- and Two-Dimensional Random Distributions (Developability of Silver Specks of Known Dimensions and the Size of Photographic Sensitivity Specks)	<i>W. F. Berg</i>	66
992	The Identity of 3- and of 5-Monochloro-2- Hydroxydiphenyl	{ <i>A. Weissberger</i> <i>I. F. Salminen</i>	74
993H	Intramolecular Ring Closures with <i>Cis</i> - and <i>Trans</i> - γ -Phenyl- γ -(2-Furyl)itaconic Acid	<i>E. B. Knoll</i>	77
995	The Distribution of Color Matchings around a Color Center	{ <i>L. Silberstein</i> <i>D. L. MacAdam</i>	80

TABLE OF CONTENTS

COMM. No.	TITLE	AUTHOR	PAGE
996	A Single-Solution Intensifier for Very Weak Negatives	{ <i>L. E. Muehler</i> <i>J. I. Crabtree</i>	81
998	Energy Additivity in Glasses	{ <i>M. L. Huggins</i> <i>K.-H. Sun</i>	91
1000	Amphipathic Character of Proteins and Certain Lyophilic Colloids as Indicated by Absorption Spectra of Dyes	{ <i>S. E. Sheppard</i> <i>A. L. Geddes</i>	95
1001	Viscosity-Molecular-Weight Relations for Cellulose Acetate Butyrate	{ <i>J. W. Tamblin</i> <i>D. R. Morey</i> <i>R. H. Wagner</i>	99
1002H	Spectrographic Plates of Substantially Uniform Contrast in the Ultraviolet	{ <i>E. P. Davey</i> <i>M. D. Gauntlett</i>	101
1003H	A Possible Source of Error in the Photographic Photometry of the Solar Corona	<i>D. R. Barber</i>	107
1004	Luther's Empirical Rule and the Quantum Theory of Exposure	<i>L. Silberstein</i>	114
1006	Color and Constitution. VI. Pyrrolocyanines	{ <i>L. G. S. Brooker</i> <i>R. H. Sprague</i>	115
1007	Color and Constitution. VII. Interpretation of Absorptions of Dyes Containing Heterocyclic Nuclei of Different Basicities	{ <i>L. G. S. Brooker</i> <i>A. L. Sklar</i> <i>H. W. J. Cressman</i> <i>G. H. Keyes</i> <i>L. A. Smith</i> <i>R. H. Sprague</i> <i>E. Van Lare</i> <i>G. Van Zandt</i> <i>F. L. White</i> <i>W. W. Williams</i>	123
1008	Color and Constitution. VIII. Absorption of Unsymmetrical Carbocyanines	{ <i>L. G. S. Brooker</i> <i>R. H. Sprague</i> <i>H. W. J. Cressman</i>	132
1009	A Direct Synthesis of 2-Methylbenzothiazolium Salts	{ <i>L. G. S. Brooker</i> <i>H. W. J. Cressman</i>	137
1010	Impact Testing of Plastics: Relation to Structure and Composition	<i>D. R. Morey</i>	139
1011H	Polycyclic Thiazoles	<i>E. B. Knott</i>	154

TABLE OF CONTENTS

COMM. No.	TITLE	AUTHOR	PAGE
1020	Studies in the Sensitivity of Photographic Materials. I.	<i>A. P. H. Trivelli</i>	158
1021	Design of a Printed Spectrum	<i>D. L. MacAdam</i>	169
1022II	Naphtha-1',2',4,5-Selenazoles	<i>E. B. Knott</i>	173
1024	The Determination of Molecular-Weight Distribution in High Polymers by Means of Solubility Limits	{ <i>D. R. Morey</i> <i>J. W. Tamblyn</i> }	174
1025	Heats of Polymerization. I. An Isothermal Calorimeter and Its Application to Methyl Methacrylate	{ <i>L. K. J. Tong</i> <i>W. O. Kenyon</i> }	182
1026	The Charge Effect in Relation to the Kinetics of Photographic Development. I. The General Effect	<i>T. H. James</i>	188
1028	Evidence for the Presence of an Angular Phenyl Group in the Bimolecular Product from Methylanthydroacetonebenzil	{ <i>C. F. H. Allen</i> <i>J. VanAllan</i> }	195
1031	Thermodynamics of High-Polymer Solutions	<i>M. L. Huggins</i>	196
1032	The Charge Effect in Relation to the Kinetics of Photographic Development. II. The Induction Period	<i>T. H. James</i>	200
1033	Carbonyl Bridge Compounds and Related Substances	<i>C. F. H. Allen</i>	209
1034II	Reactions of Alkylisoformanilides. I. With Carboxylic Acids, Sulfonic Acids, and Sulfonamides	<i>E. B. Knott</i>	210
1035	Photographic Granularity and Graininess. I. The Relationship between the Granularity and Graininess of Developed Photographic Materials	{ <i>L. A. Jones</i> <i>G. C. Higgins</i> }	213
1036	The Charge Effect in Relation to the Kinetics of Photographic Development. III. The Abnormal Behavior of Sulfite-Free Caustic Hydroquinone Developers	<i>T. H. James</i>	239

TABLE OF CONTENTS

COMM. No.	TITLE	AUTHOR	PAGE
1037	The Charge Effect in Relation to the Kinetics of Photographic Development. IV. The Variation of Emulsion Speed with Charge. The Action of Complex Developers	<i>T. H. James</i>	247
1038	The Adsorption of Gelatin to Silver Bromide	{ <i>S. E. Sheppard</i> <i>R. H. Lambert</i> <i>D. Swinehart</i>	253
1039	Effect of Chemical Composition on Relationship between Refractive Index and Abbe Value for Binary Systems	{ <i>K.-H. Sun</i> <i>M. L. Huggins</i>	261
1040	Design of Devices Used in the Study of Stress-Strain-Time Properties	<i>D. R. Morey</i>	265
1042	An Improved Masking Method for Color Transparencies	<i>R. P. Speck</i>	272
1044	A Method for the Measurement of the Energy Distribution in Optical Images	{ <i>L. A. Jones</i> <i>R. N. Wolfe</i>	279
1046	Photographic Development by Ferrous Iron in Alkaline Solution	<i>T. H. James</i>	290
1047	3,4-Dicyanobiphenyl and Related Compounds	<i>J. E. Jones</i>	295
1050	Colorimetric Specifications of Wratten Light Filters	<i>D. L. MacAdam</i>	297
1051	Hypersensitizing and Latensification: A Preliminary Survey	{ <i>S. E. Sheppard</i> <i>W. Vanselow</i> <i>R. F. Quirk</i>	298
1053	Nitroanthrapyridones	{ <i>C. F. H. Allen</i> <i>C. V. Wilson</i>	310
1054	The Monomethyldecoic Acids	<i>C. V. Wilson</i>	313
	AUTHOR INDEX		I
	SUBJECT INDEX		IX