

INDEX TO VOLUME 236 (A)

- Absorption of ultra-violet radiation by the atmospheric gases (discussion) (Ditchburn), 216.
- Analysis of high-energy neutron cross-sections (Voss & Wilson), 52.
- Archard, J. F. & Hirst, W. The wear of metals under unlubricated conditions, 397.
- Ballard, D. G. H. & Bamford, C. H. Studies in polymerization. X. 'The chain-effect', 384.
- Bamford, C. H. *See* Ballard & Bamford.
- Barrer, R. M. & Falconer, J. D. Ion exchange in felspathoids as a solid-state reaction, 227.
- Bates, D. R. The thermosphere (discussion), 206.
- Beer, M. Quantitative interpretation of infra-red dichroism in partly oriented polymers, 136.
- Bernstein, H. J., Schneider, W. G. & Pople, J. A. The proton magnetic resonance spectra of conjugated aromatic hydrocarbons, 515.
- Bilby, B. A. & Smith, E. Continuous distributions of dislocations. III, 481.
- Boltzmann equation and the one-fluid hydromagnetic equations in the absence of particle collisions (Chew, Goldberger & Low), 112.
- Bowen, E. J. & Veljković, S. The enhancement of the fluorescence of vapours, 1.
- Boyd, R. L. F. Study of solar radiation at high altitudes using rocket-borne instruments (discussion), 211.
- Bradley, J. N., Melville, H. W. & Robb, J. C. The kinetics and chemistry of the interaction of alkyl radicals. I. The disproportionation and combination of ethyl radicals, 318.
- Bradley, J. N., Melville, H. W. & Robb, J. C. The kinetics and chemistry of the interaction of alkyl radicals. II. The collision efficiency for interaction of ethyl radicals, 333.
- Bradley, J. N., Melville, H. W. & Robb, J. C. The kinetics and chemistry of the interaction of alkyl radicals. III. The disproportionation and combination of propyl radicals, 339.
- Bradley, J. N., Melville, H. W. & Robb, J. C. The kinetics of the interaction of atomic hydrogen with olefines. VII. The competitive removal of hydrogen atoms by ethylene and propylene, 454.
- Bradley, J. N., Melville, H. W. & Robb, J. C. The reaction of alkyl radicals with metal oxides. I. The reactions of ethyl radicals with molybdenum trioxide, 446.
- Brewer, A. W. & Houghton, J. T. Some measurements of the flux of infra-red radiation in the atmosphere (discussion), 175.
- Campbell, J. D. & DUBY, J. The yield behaviour of mild steel in dynamic compression, 24.
- Chew, G. F., Goldberger, M. L. & Low, F. E. The Boltzmann equation and the one-fluid hydromagnetic equations in the absence of particle collisions, 112.
- Cobb, E. C. & Saunders, O. A. Heat transfer from a rotating disk, 343.
- Computation of radiative heating rates in the atmosphere (discussion) (Curtis), 156.
- Continuous distributions of dislocations. III (Bilby & Smith), 481.
- Curtis, A. R. The computation of radiative heating rates in the atmosphere (discussion), 156.
- Curtis, A. R. & Goody, R. M. Thermal radiation in the upper atmosphere (discussion), 193.
- Darwin, Sir Charles. The Rutherford Memorial Lecture, 1956. The discovery of atomic number, 285.

- Déo, A. R., Finch, G. I. & Gharpurey, M. K. On the nature of epitaxial crystal growth, 7.
- Diederichsen, J. & Wolfhard, H. G. Spectrographic examination of gaseous flames at high pressure, 89.
- Direct study by electron microscopy of crystal lattices and their imperfections (Menter), 119.
- Discovery of atomic number. The Rutherford Memorial Lecture, 1956 (Darwin), 285.
- Discussion on radiative balance in the atmosphere (Massey and others), 145.
- Disintegrations produced in the light elements of nuclear emulsions by 950 MeV protons (McKeague), 104.
- Dissociation energy of the nitrogen molecule (Frost & McDowell), 278.
- Ditchburn, R. W. Absorption of ultra-violet radiation by the atmospheric gases (discussion), 216.
- Dobson, G. M. B. Origin and distribution of the polyatomic molecules in the atmosphere (discussion), 187.
- Duby, S. *See* Campbell & Duby.
- Enhancement of the fluorescence of vapours (Bowen & Veljković), 1.
- Falconer, J. D. *See* Barrer & Falconer.
- Felsenfeld, G. The structure of the chlorocuprate anion, 506.
- Finch, G. I. *See* Déo, Finch & Gharpurey.
- Fowler, J. F. X-ray induced conductivity in insulating materials, 464.
- Fretting corrosion of mild steel (Halliday & Hirst), 411.
- Frost, D. C. & McDowell, C. A. The dissociation energy of the nitrogen molecule, 278.
- Generalized radially symmetric wave equation (Mackie), 265.
- Gharpurey, M. K. *See* Déo, Finch & Gharpurey.
- Goldberger, M. L. *See* Chew, Goldberger & Low.
- Goody, R. M. *See* Curtis & Goody.
- Halliday, J. S. & Hirst, W. The fretting corrosion of mild steel, 411.
- Hart, R. K. The oxidation of aluminium in dry and humid oxygen atmospheres, 68.
- Hass, M. & Sutherland, G. B. B. M. The infra-red spectrum and crystal structure of gypsum, 427.
- Heat transfer from a rotating disk (Cobb & Saunders), 343.
- High-resolution spectroscopy of minor atmospheric constituents (discussion) (Migeotte), 159.
- Hirst, W. *See* Archard & Hirst, *also* Halliday & Hirst.
- Houghton, J. T. *See* Brewer & Houghton.
- Infra-red spectrum and crystal structure of gypsum (Hass & Sutherland), 427.
- Introductory remarks (discussion) (Massey), 145.
- Ion exchange in feldspaths as a solid-state reaction (Barrer & Falconer), 227.
- Jones, F. E. & Roberts, V. Solar infra-red spectroscopy from high-altitude aircraft (discussion), 171.
- Kerridge, M. & Lancaster, J. K. The stages in a process of severe metallic wear, 250.
- Kinetics and chemistry of the interaction of alkyl radicals. I. The disproportionation and combination of ethyl radicals (Bradley, Melville & Robb), 318.
- Kinetics and chemistry of the interaction of alkyl radicals. II. The collision efficiency for interaction of ethyl radicals (Bradley, Melville & Robb), 333.

- Kinetics and chemistry of the interaction of alkyl radicals. III. The disproportionation and combination of propyl radicals (Bradley, Melville & Robb), 339.
- Kinetics of the interaction of atomic hydrogen with olefines. VII. The competitive removal of hydrogen atoms by ethylene and propylene (Bradley, Melville & Robb), 454.
- Lancaster, J. K. *See* Kerridge & Lancaster.
- Low, F. E. *See* Chew, Goldberger & Low.
- McDowell, C. A. *See* Frost & McDowell.
- McKeague, R. Disintegrations produced in the light elements of nuclear emulsions by 950 MeV protons, 104.
- Mackie, A. G. The generalized radially symmetric wave equation, 265.
- Massey, H. S. W. and others. A discussion on radiative balance in the atmosphere, 145.
- Massey, H. S. W. Introductory remarks (discussion), 145.
- Melville, H. W. *See* Bradley, Melville & Robb.
- Menter, J. W. The direct study by electron microscopy of crystal lattices and their imperfections, 119.
- Migeotte, M. High-resolution spectroscopy of minor atmospheric constituents (discussion), 159.
- Miller, G. F. A note on the numerical solution of certain non-linear integral equations, 529.
- Miller, G. F. & Musgrave, M. J. P. On the propagation of elastic waves in aeolotropic media. III. Media of cubic symmetry, 352.
- Möller, F. The pattern of radiative heating and cooling in the troposphere and lower stratosphere (discussion), 148.
- Morawetz, Cathleen S. Note on a maximum principle and a uniqueness theorem for an elliptic-hyperbolic equation, 141.
- Musgrave, M. J. P. *See* Miller & Musgrave.
- Nature of epitaxial crystal growth (Déo, Finch & Gharpurey), 7.
- Neutron inelastic cross-sections between 55 and 140 MeV (Voss & Wilson), 41.
- Note on a maximum principle and a uniqueness theorem for an elliptic-hyperbolic equation (Morawetz), 141.
- Note on the numerical solution of certain non-linear integral equations (Miller), 529.
- Origin and distribution of the polyatomic molecules in the atmosphere (discussion) (Dobson), 187.
- Oxidation of aluminium in dry and humid oxygen atmospheres (Hart), 68.
- Paramagnetic resonance in dilute iron group fluorides. I. Fluorine hyperfine structure (Tinkham), 535.
- Paramagnetic resonance in dilute iron group fluorides. II. Wave functions of the magnetic electrons (Tinkham), 549.
- Pattern of radiative heating and cooling in the troposphere and lower stratosphere (discussion) (Möller), 148.
- Photochemical and thermal formation of colour centres in potassium azide crystals (Tompkins & Young), 10.
- Pople, J. A. *See* Bernstein, Schneider & Pople.
- Propagation of elastic waves in aeolotropic media. III. Media of cubic symmetry (Miller & Musgrave), 352.
- Proton magnetic resonance spectra of conjugated aromatic hydrocarbons (Bernstein, Schneider & Pople), 515.
- Quantitative interpretation of infra-red dichroism in partly oriented polymers (Beer), 136.

- Reaction of alkyl radicals with metal oxides. I. The reactions of ethyl radicals with molybdenum trioxide (Bradley, Melville & Robb), 446.
- Robb, J. C. *See* Bradley, Melville & Robb.
- Roberts, V. *See* Jones & Roberts.
- Robinson, G. D. The use of surface observations to estimate the local energy balance of the atmosphere (discussion), 160.
- Rutherford Memorial Lecture, 1956. The discovery of atomic number (Darwin), 285.
- Saunders, O. A. *See* Cobb & Saunders.
- Schneider, W. G. *See* Bernstein, Schneider & Pople.
- Smith, E. *See* Bilby & Smith.
- Solar infra-red spectroscopy from high-altitude aircraft (discussion) (Jones & Roberts), 171.
- Some measurements of the flux of infra-red radiation in the atmosphere (discussion) (Brewer & Houghton), 175.
- Spectrographic examination of gaseous flames at high pressure (Diederichsen & Wolfhard), 89.
- Stages in a process of severe metallic wear (Kerridge & Lancaster), 250.
- Structure of the chlorocuprate anion (Felsenfeld), 506.
- Studies in polymerization. X. 'The chain-effect' (Ballard & Bamford), 384.
- Study of solar radiation at high altitudes using rocket-borne instruments (discussion) (Boyd), 211.
- Sutherland, G. B. B. M. *See* Hass & Sutherland.
- Theory of thundercloud electricity (Wilson), 297.
- Thermal radiation in the upper atmosphere (discussion) (Curtis & Goody), 193.
- Thermosphere (discussion) (Bates), 206.
- Tinkham, M. Paramagnetic resonance in dilute iron group fluorides. I. Fluorine hyperfine structure, 535.
- Tinkham, M. Paramagnetic resonance in dilute iron group fluorides. II. Wave functions of the magnetic electrons, 549.
- Tompkins, F. C. & Young, D. A. The photochemical and thermal formation of colour centres in potassium azide crystals, 10.
- Use of surface observations to estimate the local energy balance of the atmosphere (discussion) (Robinson), 160.
- Veljković, S. *See* Bowen & Veljković.
- Voss, R. G. P. & Wilson, R. Neutron inelastic cross-sections between 55 and 140 MeV, 41.
- Voss, R. G. P. & Wilson, R. The analysis of high-energy neutron cross-sections, 52.
- Wear of metals under unlubricated conditions (Archard & Hirst), 397.
- Wilson, C. T. R. A theory of thundercloud electricity, 297.
- Wilson, R. *See* Voss & Wilson.
- Wolfhard, H. G. *See* Diederichsen & Wolfhard.
- X-ray induced conductivity in insulating materials (Fowler), 464.
- Yield behaviour of mild steel in dynamic compression (Campbell & Doby), 24.
- Young, D. A. *See* Tompkins & Young.