devoted to this topic; this volume relates to the meeting in August 1994 (Washington, DC). As the authors remind us in the preface, this is an area where organometallic and inorganic chemistry necessarily link with polymer science, materials science, catalytic studies and biochemistry to produce a distinctive interdisciplinary flavour. The actual and potential technological and economic significance of these materials has led to a huge increase in research activity; chemists have made pivotal contributions, and this book is largely written from a chemical perspective.

The book opens with a helpful 35-page overview of the whole area of inorganic and organometallic polymers, contributed by the editors. This includes discussion of silicones and polyphosphazenes as well as polymers with transition metal atoms in the backbone and coordination polymers. The 36 chapters which follow are almost all detailed accounts of recent original work on these systems (except phosphazenes), together with polymers containing pendant metal-containing groups and metal-impregnated polymers. To give some examples which illustrate the scope of these articles, ring-opening polymerisation of metallocenophanes has yielded $[-Y(\eta\text{-}C_5H_4)M(\eta\text{-}C_5H_4-]_x$ polymers (Y = SiR_2, GeR_2, CH_2CH_2; M = Fe, Ru); pendant groups containing Os_3 and $(C_2B_9)_2Co$ (dicarbollide) clusters have been attached to the phenyl rings of polystyrene; soluble and thermally stable coordination polymers of Ce(IV) and Zr(IV) with bis-tetradentate Schiff bases are described; both polysilanes and polysiloxanes with pendant metal carbonyl groups have been prepared; there are structural studies on metallosiloxanes with Si–O–M backbones (M = Mn, Ni, Cu); silver compounds incorporated in polyimide films can be reduced and migrate to form a reflective surface coating of silver; and the polymeric product prepared by the reaction of gibberellic acid with $(\eta\text{-}C_5H_5)_2TiCl_2$ retains the plant growth-promoting properties of the parent acid. Also transition metal compounds are shown to catalyse the oxidative polymerisation of disulphides or thioethers to poly(phenylenesulphide), while the Ziegler–Natta catalyst system $TiCl_4/Et_2AlCl$ or peroxotungstate(VI) groups attached to polystyrene catalyse alkene polymerisation and epoxidation respectively. Metal-containing biopolymers are the subject of a long review chapter, while there are also accounts of metallopeptide production and electron transfer reactions in metalloproteins.

Many of these systems have obviously been studied with applications in mind. Some can, on pyrolysis, produce useful ceramics and others can function as semiconductors, non-linear optical materials, optoelectronic devices, liquid crystals, and magnetic materials. For the organometallic chemist already working in this area or wishing to enter it, this volume offers a valuable wide-angle snapshot of the current situation. The book is well produced and indexed, and can be warmly recommended.

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Gmelin Handbook of Inorganic and Organometallic Chemistry. Ga. Gallium. Suppl. Vol. C2, Compounds with Nitrogen. Springer-Verlag, Berlin, 8th edn., 1996, 230 pages + xiii, DM 1425.00, ISBN 3-540-93731-5.

This supplement to the series on gallium compounds deals wholly with inorganic compounds but will be of direct interest to organometallic chemists interested in the formation of gallium nitride and related compounds.

About 80% of the volume is taken up by the important species α-GaN, which has considerable potential for applications in high-power and high-frequency electronic and opto-electronic devices such as semiconductor lasers, light-emitting diodes, and optical detectors. The account deals with its preparation and formation (as crystals and films), its crystallographic, mechanical, thermal, magnetic, electric, optical, and dielectric properties, and with its chemical reactions.

The remainder of the volume deals with inorganic gallium compounds containing both nitrogen and hydrogen [e.g. $(H_2GaNH_2)_3$, $Ga(NH_2)_3$] (10 pages) and those containing nitrogen along with oxygen and/or hydrogen [e.g. $Ga(NO_3)_3$, $Ga(NO_2)_3$, GaO_xN_y, GaO_xN_y, $Ga(OH_2)NO_2$] (27 pages, 18 of them devoted to $Ga(NO)_3$ and its hydrates). As is usual in Gmelin volumes, a massive amount of information is presented clearly and concisely.

The authors, H. Katscher and B. Mohsin, are to be thanked for this very useful compilation.

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