novel phase, "X." (Topotactic rearrangement of P to the known acicular polymorph of its benzoxiodole isomer, 3-oxo-3H,2,1-benzoxiodol-1-yl *m*-chlorobenzoate, occurs only at elevated temperatures, ~55°C). In a much slower, consecutive transformation, during further continuous exposure to X-rays, "X" is photochemically reduced to *o*-iodobenzoic acid (C), which also is formed as a single crystal phase. The resulting single crystal domains of D and E in decomposed pseudomorphs of P are mutually oriented in a manner which reflects their strikingly similar crystal structures. The structure of D has been determined by single crystal X-ray analysis in order to compare the aligned molecular packing arrangements of D and C, and P and D. The mutual alignment of P and E is also presented in this report. All of these topotactic products are aligned so as to conserve the point group symmetry of the parent crystal, P (conservative twinning).

Characterization of CoO–ZnO Solid Solutions. F. PEPE, M. SCHIAVELLO, AND G. FERRARIS. Istituto di Chimica Generale ed Inorganica, Universita di Roma, Rome, Italy. Lattice parameters, magnetic susceptibilities (over the temperature range 98–298°K) and reflectance spectra (uv and visible) of solid solutions of CoO–ZnO up to 10% molar CoO have been studied. It is shown that true solid solution is achieved and that Co^{2+} ions substitute for the Zn^{2+} ions in tetrahedral positions. The effect of the addition of Co^{2+} is to increase the a lattice parameter and to decrease the c/a ratio. The magnetic moment of Co^{2+} has been found to be $4.54 \times 0.05\ \mu_B$ by extrapolation. A discussion of the structural and magnetic data in terms of the presence of a C_{3v} effective symmetry is given.