In his work on the doctrine of the Divinity of Christ *(Die Lehre von der Gottheit Christi,* 1881) he follows the method of Ritschl, and contends that the deity of Christ ought to be understood as the expression of the experience of the Christian community. In his own person and work Christ represents to the community a personal revelation of God. Faith in the divinity of Christ does not rest upon a miracle in nature, but upon a miracle in the moral world.

Schultz’s other works include : *Die Stellung des christl. Glaubens zur heiligen Schrift* (1876; 2nd ed., 1877), *Lehre vom heiligen Abendmahl* (1886); *Grundriss der evang. Dogmatik* (1890; 2nd ed., 1892), *Grundriss der evang. Ethik* (2nd ed., 1897), and *Grundriss der christl. Apologetik* (2nd ed., 1902).

SCHULTZE, MAX JOHANN SIGISMUND (1825-1874), German microscopic anatomist, was born at Freiburg in Breisgau (Baden) on the 25th of March 1825. He studied medicine at Greifswald and Berlin, and was appointed extraordinary professor at Halle in 1854 and five years later ordinary professor of anatomy and histology and director of the Anatomical Institute at Bonn. He died at Bonn on the 16th of January 1874. He founded, in 1865, and edited the important *Archiv für mikroskopische Anatomie,* to which he contributed many papers, and he advanced the subject generally, by refining on its technical methods. His works included *Beiträge zur Naturgeschichte der Turbellarien* (1851), *Über den Organism us der Polylhalamien* (1854), *Beiträge zur Kenntnis der Landplanarien* (1857), *Zur Kenntnis der elek­trischen Organe der Fische* (1858) and *Zur Anatomie und Physio­logie der Retina* (1866). His name is especially known for his work on the cell theory. Uniting F. Dujardin’s conception of animal sarcode with H. von Mohl’s of vegetable protoplasma, he pointed out their identity, and included them under the common name of protoplasm, defining the cell as “ a nucleated mass of protoplasm with or without a cell-wall ” *(Das Proto­plasma der Rhizopoden und der Pflanzenzellen ; ein Beitrag zur Theorie der Zelle,* 1863).

SCHULZE-DELITZSCH, FRANZ HERMANN (1808-1883), German economist, was born at Delitzsch, in Prussian Saxony, on the 29th of August 1808. The place-name Delitzsch was added in 1848 to distinguish him from other Schulzes in the National Assembly. He studied law at Leipzig and Halle universities and, when thirty, he became an assessor in the court of justice at Berlin, and three years later was appointed *patrimonialrichter* at Delitzsch. Entering the parliament of 1848, he joined the Left Centre, and, acting as president of the commission of inquiry into the condition of the labourers and artisans, became impressed with the necessity of co-operation to enable the smaller trades- people to hold their own against the capitalists. He was a member of the Second Chamber in 1848-1849; but as matters ceased to run smoothly between himself and the high legal officials, he threw up his public appointments in October 1851, and with- drew to Delitzsch. Here he devoted himself to the organization and development of co-operation in Germany, and to the foundation of Vorschussvereine (people’s banks), of which he had established the first at Delitzsch in 1850. These developed so rapidly that Schulze-Delitzsch in 1858, in *Die arbeitenden Klassen und das Assoziationswesen in Deutschland,* enumerated twenty-five as already in existence. In 1859 he promoted the first *Genossenschaftstag,* of co-operative meeting, in Weimar, and founded a central bureau of co-operative societies. In 1861 he again entered the Prussian Chamber, and became a prominent member of the Progressist party. In 1863 he devoted the chief portion of a testimonial, amounting to £7500, to the maintenance of his co-operative institutions and offices. This, however, was only to meet an exceptional outlay, for he always insisted that they must be self-supporting. The next three or four years were given to the formation of local centres, and the establishment of the Deutsche Genossenschafts-Bank, 1865.

The spread of these organizations naturally led to legislation on the subject, and this too was chiefly the work of Schulze- Delitzsch. As a member of the Chamber in 1867 he was mainly instrumental in passing the Prussian law of association, which was extended to the North German Confederation in 1868, and later to the empire. Schulze-Delitzsch also contributed to

uniformity of legislation throughout the states of Germany, in 1869, by the publication of *Die Gesetzgebung über die privat­rechtliche Stellung der Erwerbs- und Wirthschaftsgenossenschaften,* &c. His life-work was now complete ; he had placed the advantages of capital and co-operation within the reach of struggling tradesmen throughout Germany. His remaining years were spent in consolidating this work. Both as a writer and a member of the Reichstag his industry was incessant, and he died in harness on the 29th of April r883 at Potsdam, leaving the reputation of a benefactor to the smaller tradesmen and artisans, in which light he must be regarded rather than as the founder of true co-operative principles in Germany. (See also Co-operation.)

**SCHUMACHER, HEINRICH CHRISTIAN** (1780-1850), German astronomer, was born at Bramstedt in Holstein on the 3rd of September 1780. He was director of the Mannheim observatory from 1813 to 1815, and then became professor of astronomy in Copenhagen. From 1817 he directed the triangulation of Holstein, to which a few years later was added a complete geodetic survey of Denmark (finished after his death). For the sake of the survey an observatory was established at Altona, and Schumacher resided there permanently, chiefly occupied with the publication of *Ephemerides* (11 parts, 1822-1832) and of the journal *Astronomische Nachrichten,* of which he edited thirty- one volumes. He died at Altona on the 28th of December 1850.

His son, Richard Schumacher (1827-1902), was his assistant from 1844 to 185o at the conservatory at Altona. Having become assistant to Carlos Guillelmo Moesta (1825-r884), director of the observatory at Santiago, in 1859, he was associated with the Chilean geodetic survey in 1864. Returning in 1869, he was appointed assistant astronomer at Altona in 1873, and afterwards at Kiel.

H. C. Schumacher’s nephew, Christian Andreas Schu­macher (1810-1854), was associated with the geodetic survey of Denmark from 1833 to 1838, and afterwards (1844-1845) improved the observatory at Pulkowa.

SCHUMANN, ROBERT ALEXANDER (1810-1856), German musical composer, was born on the 8th of June 1810 in Zwickau in Saxony. His father was a publisher, and it was in the cultivation of literature quite as much as in that of music that his boyhood was spent. He himself tells us that he began to compose before his seventh year. At fourteen he wrote an essay on the aesthetics of music and also contributed to a volume edited by his father and entitled *Portraits of Famous Men.* While still at school in Zwickau he read, besides Schiller and Goethe, Byron (whose *Beppo* and *Childe Harold* had been translated by his father) and the Greek tragedians. But the most powerful as well as the most permanent of the literary influences exercised upon him, however, was undoubtedly that of Jean Paul Richter. This influence may clearly be seen in his youthful novels *Junius- abende* and *Selene,* of which the first only was completed (1826). In 1828 he left school, and after a tour, during which he met Heine at Munich, he went to Leipzig to study law. His interest in music had been stimulated when he was a child by hearing Moscheles play at Carlsbad, and in 1827 his enthusiasm had been further excited by the works of Schubert and Mendelssohn. But his father, who had encouraged the boy’s musical aspirations, had died in 1826, and neither his mother nor his guardian approved of a musical career for him. The question seemed to be set at rest by Schumann’s expressed intention to study law, but both at Leipzig and at Heidelberg, whither he went in 1829, he neglected the law for the philosophers, and though—to use his own words—“but Nature’s pupil pure and simple” began composing songs. The restless spirit by which he was pursued is disclosed in his letters of the period. At Easter 1830 he heard Paganini at Frankfurt. In July in this year he wrote to his mother, “ My whole life has been a struggle between Poetry and Prose, or call it Music and Law,” and by Christmas he was once more in Leipzig, taking piano lessons with his old master, Friedrich Wieck. In his anxiety to accelerate the process by which he could acquire a perfect execution he permanently injured his right hand. His ambitions as a pianist being thus