

## **EVENTS AT THE PRECAMBRIAN-PALEOZOIC-BOUNDARY AND GEOTECTONIC SETTING OF CADOMIAN AND EARLY PALEOZOIC OROGENIC PROCESSES OF CENTRAL AND WESTERN EUROPE**

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The Cadomian Orogen of Central and Western Europe consists of remnants of Island arcs and marginal basins originated during the Late Neoproterozoic and the earliest Cambrian (575-540 Ma). The vector of sub- and obduction to the margin of Gondwana was oblique. The Cadomian Orogeny took place during the earliest Cambrian (540 Ma) by the deformation and accretion of the Neoproterozoic system of island arcs and marginal basins to the Westafrican and Sub-Saharan Cratons). A transform margin was developed during the Lower and Middle Cambrian (540-505 Ma), which was the cause of opening and closing of Lower to Middle Cambrian pull-apart basins on the consolidated basement of the Cadomian Orogen. An uplift and chemical weathering during the Upper Cambrian (505-495 Ma) is represented by the origin of a chemical weathering crust under humid to subtropical conditions. The subsidence and shelf sedimentation in the Ordovician (495-443 Ma) was rift-controlled. The transgression on the peri-Gondwanan shelf during the Tremadoc was combined with the recycling of the chemical weathering crust and the opening of a rift basin with related magmatism was developed at 490 Ma. The rifting processes finally led to the separation of the Armorican Terrane Collage (ATC) during the Late Ordovician and overlaps with the Saharan glaciation (Ashgill). The ATC was transported by plate tectonic processes during the Silurian and becomes a part of Europe during Variscan collision tectonics in Devonian and Early Carboniferous times.