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华南武功山地区韧性剪切带的纳米尺度测量研究 [点此下载全文](#)

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摘要:

在华南加里东造山带中段区域构造调查和中法合作研究的基础上, 对武功山地区从新元古代到中生代的影片理带和拉伸构造带等多种构造类型的变形带, 就其超微观纳米粒子结构和动力薄膜进行了扫描电镜(SEM)测量。带的表层高应变域ab、ac组构造面上均发现纳米粒子, 颗粒直径一般为50~90nm, 并因研磨滚动而形成磨粒(grind line)和纳米层构成一套纳米微线理、面理和组构系统, 与宏观的线理和面理平行一致, 还可见到完好的超微S-C矿物。韧性剪切的所谓静态摩擦, 实际上是纳米界限层以微弱摩擦力推进滑移量(slippage)形成的平滑运动, 这磨粒滚动滑移所致。本文从上述几方面揭示了韧性剪切带中纳米粒子存在的普遍性; 纳米结构与显微构造的可比性。最后, 以区内韧性剪切带在地壳浅构造位异常发育的特点, 从一个方面讨论华南加里东构造带在系统动力学

关键词: [韧性剪切带](#) [纳米粒子](#) [平滑运动](#) [加里东造山带](#) [武功山](#)

Nano Scaled Study on the Ductile Shear Zone in Wugongshan, South China [Download](#)

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Abstract:

Based on the Sino France cooperated regional tectonics investigation of the middle part of in South China, SEM studies on nano sized particles and dynamic thin shell or films in different from Neoproterozoic to Mesozoic (ductile cleavage zone, thrust fault zone, extrusion schistose zone) in Wugongshan were carried out. Nano sized particles(50~90 nm), grinded and rolled into grinding and ac fabric planes of the high strain zone on the surface of the four types of ductile shear zone particles, lines and layers composed a system of nano sized lineation, foliation and fabrication. Ultra micro S-C foliation and preferred nano sized stress mineral. In addition, the so called "static friction" is actually the smooth movement, which is formed by slip friction of nano sized particle layers, and caused by the grinding and rolling of the nano sized particle. We discovered that the nano sized particle layers are widely distributed in ductile shear zone textures is comparable to the micro sized textures, and the mechanism of ductile shear movement is discussed the system dynamics on the time delay of the Caledonian orogenic belt in South China, shear were abnormal developed in the superficial structural position of this area.

Keywords: [ductile shear zone](#) [nano sized particle](#) [smooth movement](#) [Caledonian orogenic belt](#) [Wu](#)