目录

中文稿件要求

一、内容要求

1. 全文分为六大部分，总字数控制在 1000 字以内。

2. 文章题目应与最终出版文章严格一致。

二、图表要求

1. 图和表一共 3-4 个为宜，图表内容应与最终出版文章严格一致。

2. 图片清晰，需为 JPEG、JPG、PNG 不可编辑的位图格式，嵌入式排版。若图中有若干分图，请合并成一个大图。

3. 图题放图外且全篇统一顺序编号。

4. 表题放表外且全篇统一顺序编号。

5. 图表中不要有大量文字罗列，以免影响英文图表效果。

三、格式要求

1. 各级标题设好级别，图表、图题表题、图注表注居中排，具体见中文模板中标注。

2. 文中尽量不要有电子公式，如需使用可以截图，以免网页不能正常显示。

3. 编辑部确认环节，应提交带修订痕迹的 word 版本。

中文模板

基于滑模控制的牵引网低频振荡抑制方法 【一级标题】

1 创新点（简要概括文章创新之处） 【二级标题，下同】

针对 CRH5 型动车组网侧整流器低频振荡问题，提出一种基于滑模控制的低频振荡抑制方法。

2 选题依据（简要阐明选题的意义、背景等）

随着动车组高密度、大范围的推广使用，牵引供电系统中投入越来越多的动车组，所投入的动车组含有大量电力电子器件，这些非线性的电力电子器件使得车网耦合系统的动态性能和静态性能更加复杂化,从而引发牵引网低频振荡造成动车组牵引封锁，影响电气化铁路的安全稳定运行。目前国内外均有发生牵引网低频振荡的案例，造成了非常严重的影响，严重影响了牵引供电系统的电能质量以及高速铁路良好的运输秩序。为防止牵引网低频振荡现象再次发生，助力我国高速铁路持续健康发展，因此我们选择研究抑制牵引网低频振荡作为本文研究的主要问题。

3 研究方案或路线（以图或简要文字的形式展示研究方案或路线，包括但不限于以下方面：研究目的、实验设计、科研数据、结果分析等）

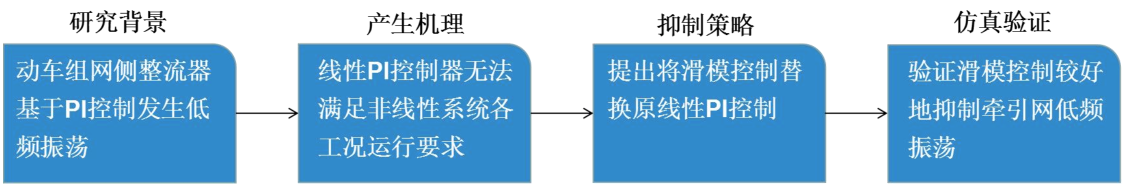

图 1 研究方案 【居中排，下同】

4 研究内容与数据（展示文章最主要的图表或数据，要求图表清晰，数量控制在 3-4 个，并按顺序给图表重新编号）

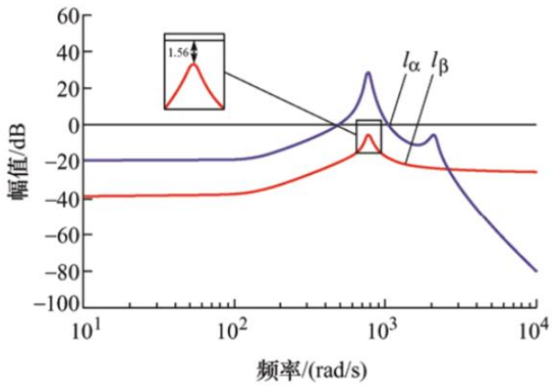

图 2 车网耦合系统稳定性分析

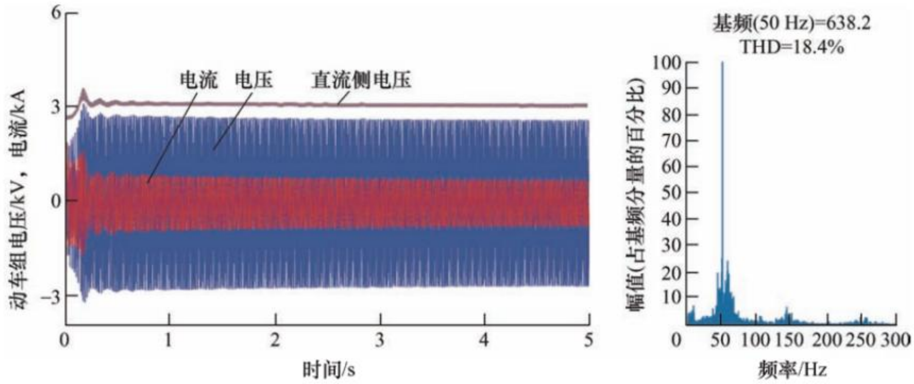

图 3 动车组接入时电压、电流波形

5 主要结论（逐条列出文章结论，并加上编号）

1）通过改进 sum-范数判据验证了牵引网耦合低频振荡主要与牵引网侧的等效阻抗和动车组侧的等效导纳有关。传统线性 PI 控制器已无法较好地实现动车组非线性网侧整流器的控制目标要求，对外部扰动没有良好的抑制能力。

2）网侧整流器电压外环采用滑模控制能够有效抑制低频振荡现象，车网耦合系统临界稳定点提升，使系统具有更强的鲁棒性，对电气化铁路负荷波动较大的场合具有良好的控制性能。

6 作者简介（第一作者和/或通讯作者简介）

【第一作者】胡颖新，男，1996 年生，硕士研究生。主要研究方向为牵引网低频振荡抑制方法。

宁志豪，男，1983 年生，硕士研究生导师。主要研究方向为谐波抑制、电能质量、无功补偿等。

【通讯作者】兰征，男，1985 年生，博士，硕士研究生导师。主要研究方向为柔性电能调控技术，微电网控制等。

英文稿件要求

一、内容要求

1. 全文分为六大部分，总字数控制在 1000 词以内。

2. 文章题目应与最终出版文章严格一致。

3. 文章最后须提供文章全部作者的姓名和单位信息（中英对照），中英文关键词。

二、图表要求

1. 图和表一共 3-4 个为宜，图表内容应与最终出版文章严格一致。

2. 图片清晰，需为JPEG、JPG、PNG不可编辑的位图格式，嵌入式排版。若图中有若干分图，请合并成一个大图。

3. 图题放图外且全篇统一顺序编号。

4. 表题放表外且全篇统一顺序编号。

5. 图表中不要有大量文字罗列，以免影响英文图表效果。

三、格式要求

1. 各级标题设好级别，图表、图题表题、图注表注居中排，具体见英文模板中标注。

2. 文中尽量不要有电子公式，如需使用可以截图，以免网页不能正常显示。

3. 编辑部确认环节，应提交带修订痕迹的word版本。

英文模板

Tectonogeophysical studies on the crustal-scale interactions beneath the dominant collision zone between the Indian and Eurasian plates 【一级标题】

1 Highlights （简要概括文章创新之处） 【二级标题，下同】

This is an integrated analysis, including long deep seismic reflection profiles and previous study results of geochemistry and petrology, on the crustal-scale interactions beneath the dominant collision zone between the Indian and Eurasian plates.

2 Background （简要阐明选题的意义、背景等）

Since the onset of the Indian subduction beneath the Eurasian plate along the Yarlung-Zangbo suture zone (YZSZ) during the Cenozoic, the processes in terms of how the Indian plate has been acting raises wide interest among geologists. However, it remains vague regarding the crustal-scale vertical interactions beneath the dominant collision zone, partly owing to the lack of high-resolution datasets, which therefore has severely retarded the understanding of the crustal thickening mechanism of the dominant collision zone and the deep geodynamic processes. In this study, based on two deep seismic reflection profiles that, respectively, cut through the middle and eastern part of the YZSZ across the dominant collision zone, we aim to document the lateral and vertical contact relations between the subducting Indian plate and the overriding Lhasa terrane.

3 Research scheme （以图或简要文字的形式展示研究方案或路线，包括但不限于以下方面：研究目的、实验设计、科研数据、结果分析等）

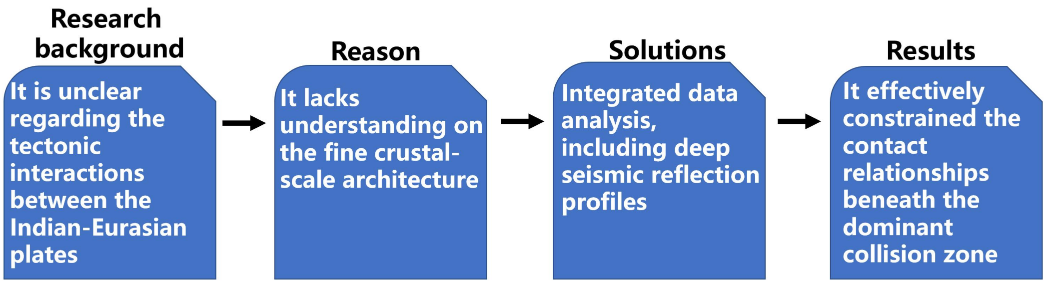

Fig. 1 Research scheme 【居中排，下同】

4 Results （展示文章最主要的图表或数据，要求图表清晰，数量控制在 3-4 个，并按顺序给图表重新编号）

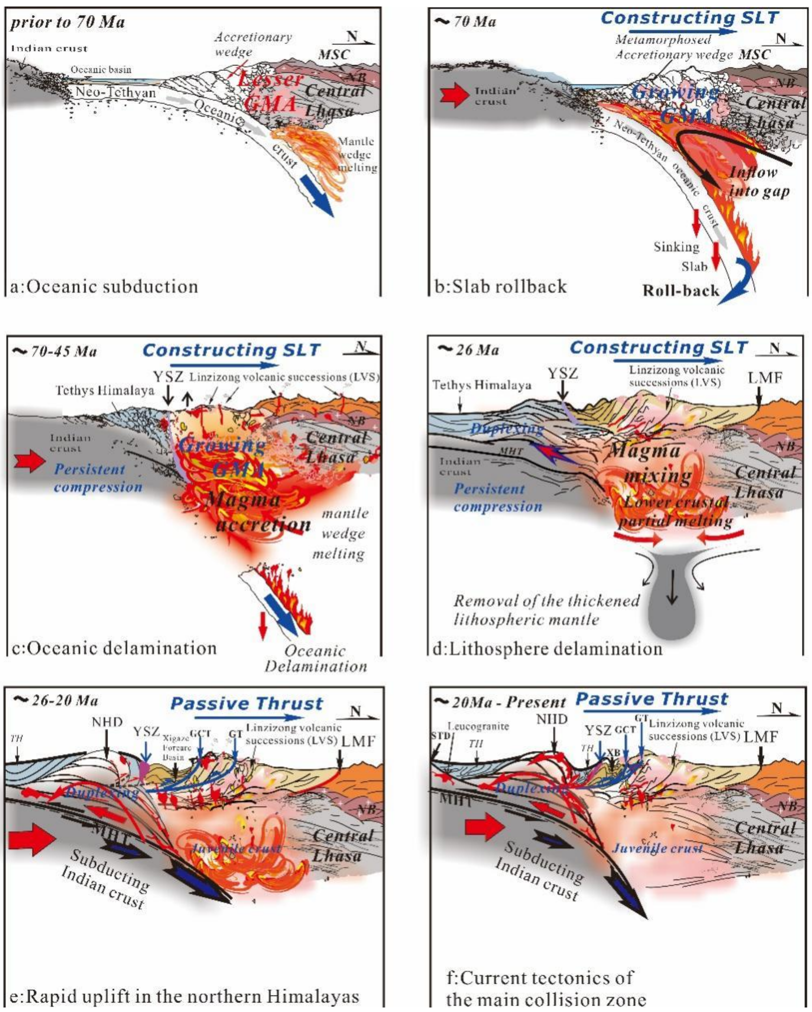

Fig. 2 Interactions between the lateral and vertical crustal growth of the dominant collision between Indian and Eurasian plates

5 Conclusions （逐条列出文章结论，并加上编号）

(1) We present the lateral and vertical contact relations between the subducting Indian plate and the overriding Lhasa terrane, including (a) laterally, subduction of the Indian crust occurs in its lower crust and is limited in the horizontal advance distance. Non-reflective crust is presented in the southern Lhasa terrane (SLT), while the central Lhasa terrane (CLT) is shown with consistent north-dipping reflections; (b) vertically, the Indian plate is undergoing subduction in the lower crust, while the middle-to-upper crust is experiencing top-to-the south crustal duplexing. Almost three fourth of the SLT is occupied with transparent reflections, while the other one fourth of the terrane in its upper crust is presented with consistent south-dipping reflections. The CLT is separated into two reflection domains by the north-dipping reflections in the lower crust and concave-downward reflections in the upper crust. The vertical difference in reflection zonation is shown in all three tectonic units; (c) the upper crust of the dominant collision zone is consistent in the deformation pattern, where a sequence of break-backward imbricate structures is present. This break-backward imbricate system can be traced from the Luobadui-Mila fault of the northern edge of the SLT, beyond the YZSZ, to the northern edge of the northern Himalayan dome belt.

(2) Combing previous studies in the coincident magnetotelluric data on southward migration of the high conductive barrier along the main Himalayan thrust into the northern Himalayas, we believe the episodic magmatism in the Tethyan domain beneath the SLT generated juvenile crust that is prone to be thickened to this anomalous thickness. Meanwhile, the mantle-sourced magmatism generated from the northward subduction of the Neo-Tethyan oceanic slab and the subsequent collision between Indian and Eurasian plates has experienced southward migration during the tectonic interactions between the Indian and Eurasia plates, which thermally weakened the northern Himalayas and decreased the crustal mechanics. The currently ongoing crustal-scale duplexing is therefore presented in a way of short-wavelength antiformal stacking to thicken the crust.

(3) Meanwhile, rapid exhumation of the northern Himalayan dome by the process of increased antiformal stacking exerts sudden compression to the overlying Tethyan Himalayan sequence, which eventually created in the upper crust through the whole dominant collision zone with fault-propagation folds following a break-backward sequence.

(4) Overall, vertical and lateral tectonic interactions within the dominant collision zone between the Indian and Eurasian plates have played an important role in producing such an anomalously thick crust, but the break-backward imbricates system in the upper crust lowers the topographic relief of the dominant collision zone as well.

6 About the authors （第一作者和/或通讯作者简介）

[First author] GUO Xiaoyu (1979–), female, Ph.D., is interested in deep deformation of the Tibetan Plateau and the plateau margins.
[Corresponding author] XU Xiao (1980–), male, Ph.D., is interested in tectonogeophysical studies on the Tibetan Plateau.

Supplementary information

【请提供全部作者的姓名及单位信息，中英对照】

郭晓玉[1,2], 罗旭聪[1,2], 高锐[1,2], 徐啸[1,2], 卢占武[3], 黄兴富[4,5], 李文辉[3], 李春森[1,2]
1.中山大学 地球科学与工程学院, 广东 珠海 519082
2.南方海洋科学与工程广东省实验室(珠海), 广东 珠海 519082
3.中国地质科学院 地质研究所, 北京 100037
4.桂林理工大学 地球科学学院, 广西 桂林 541004
5.广西隐伏金属矿产勘查重点实验室, 广西 桂林 541004
GUO Xiaoyu[1,2], LUO Xucong[1,2], GAO Rui[1,2], XU Xiao[1,2], LU Zhanwu[3], HUANG Xingfu[4,5], LI Wenhui[3], LI Chunsen[1,2]
1. School of Earth Sciences and Engineering, Sun Yat-sen University, Zhuhai 519082, China
2. Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai), Zhuhai 519082, China
3. Institute of Geology, Chinese Academy of Geological Sciences, Beijing 100037, China
4. College of Earth Sciences, Guilin University of Technology, Guilin 541004, China
5. Guangxi Key Laboratory of Exploration for Hidden Metallic Ore Deposits, Guilin 541004, China

关键词: 印度-欧亚板块碰撞, 主碰撞带, 全地壳尺度结构 **【请提供中英文关键词】**
Key words: collision between Indian and Eurasian plates, dominant domain in collision zone, crustal-scale architecture